

POPULATION TODAY

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FEATURES

3 Thailand's achievement

A momentous fertility-reduction success story is unfolding in this Asian country

4 World Bank renews population concerns

"It is imperative," says Bank president Barber Conable, "that developing countries . . . expand efforts to limit population growth"

5 U.S. households diversify

Not only that, they're shrinking, too—down to 2.64 persons in 1988, Census survey reports

5 Miscellaneous news from the Census Bureau

Data price-rise threatened, Dymally bill dies

6 A tale of two states

The Bay State and the Beehive State—two different TFRs, two very different population futures

8 Paper your wall with numbers!

The latest population wall charts from all over

9 A year of droughts and floods

And despite better weather, food production per capita continues to fall in Africa

12 Only 2 percent of Rwanda's women use modern contraception

East African country's mortality has declined, while fertility is 8.6 children per woman

DEPARTMENTS

2 From the editor's desk

2 Speaking graphically

3 Survey report (Thailand)

6 Demographer's page

9 Softwhere

9 Population update

10 Take a number

10 Positions/professionals

11 Current readings

12 Spotlight (Rwanda)



FAO photo F. Botts

Thailand's family-planning program marches on. (See page 3.)

PRB

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FROM THE EDITOR'S DESK

"The Asian Century" — that's how a spate of recent books have dubbed the 21st Century, now only 12 years away (13 years away for purists who consider '01 to be the bona fide beginning of any century).

This title may well describe the economic state of the world, due to the Pacific Rim's booming development. But insofar as population magnitude is concerned, the graph below tells a different story.

In schematic form, it shows each continent's relative proportions of world population between 1400 and 2200. What it reveals is that from Antiquity up to the present, every century has been the Asian Century. By comparison, Europe, the Americas, and Africa have been super-numeraries on history's population stage.

The chief population events of

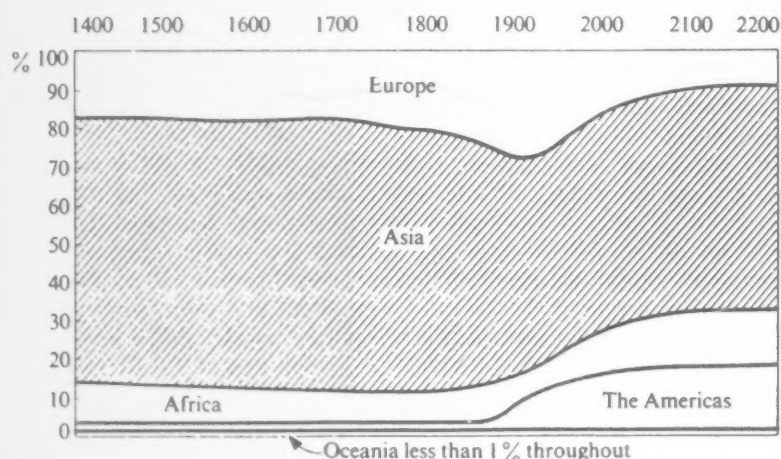
the past 500 years have been European boom times, sustained by economic expansion and innovation, the establishment of large numbers of people in the Americas, the long transition toward low fertility in the more developed countries, and the 20th century population explosion in the less developed world. Effects of these trends are highly visible in the graph.

What about the world's future? The trend lines plotted below project an unprecedented diversification of world population across continents (thanks largely to Asia's family planning lead among less developed countries). One possible result could be that a couple of generations hence, pundits will vocally predict the 23rd Century to mark the start of the African Century or the Latin American Century. You watch.

— Art Haupt

SPEAKING GRAPHICALLY

Population by Continent, 1400-2200



This schematic "population history" of the world is reproduced with permission from Colin McEvedy and Richard Jones's *Atlas of World Population History* (1978), published by Penguin. It may differ slightly from more detailed and recent projections, but the broad story remains the same. The drop in Asian and Latin American fertility (at 3.6 and 3.7 average lifetime children per woman, respectively) will mean slowing growth in these continents, while Africa's higher fertility (6.3 average children) will tend to increase that continent's proportion of world population in coming decades.

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Thai Fertility Falls Toward MDC Levels

Thailand's fertility decline, which began in the 1960s, has continued through the 1980s without fanfare or letup, according to recent survey results from that Southeast Asian country of 55 million people.

Due to widespread use of contraception, national fertility now registers figures near those of more developed countries (MDCs). As a result, Thailand may well rank fourth-lowest in fertility among major countries of the Third World — after Cuba, China and South Korea.

The 1987 Demographic and Health Survey (DHS) results suggested that the country's total fertility rate (TFR) may be as low as 2.4 children per woman on average, with about 65.5 percent of the married women of reproductive age (age 15 to 49) practicing contraception. The 2.4 figure, if correct, would mean that Thai fertility was within hailing distance of replacement level (approximately 2.1 children per woman).

The survey, part of the Demographic and Health Survey project coordinated by the Institute for Resource Development of Westinghouse in Columbia, Md., also collected valuable information about the health of young children and mothers, including illnesses, physical growth of children, and use of medical care. A total of 6,775 ever-married women aged 15 to 49 were interviewed for the study, and 1,849 children between 3 and 36 months of age were weighed and measured to study age-appropriate physical growth.

Thailand has been a leader in the family planning movement since the 1960s, principally as a result of the efforts of its energetic National Family Planning Program. International organizations like the IPPF contributed to the availability of methods and knowledge about family planning.

Between 1969 and 1984, contraceptive use expanded from 15 to 65 percent of married women 15 to 44 years of age. Fertility dropped from a 6-child average to just above 3 children per woman during those years.

Fertility continued to fall; Thai culture apparently encourages shifts in family size to adjust to changing social

conditions. While the 1984 Contraceptive Prevalence Survey (CPS) survey hinted of a stall in fertility decline — showing a TFR of 3.4 for 1982 to 1984, other research results show no evidence that any such stall took place. The DHS data for the same period measured a TFR of only 2.6.

The DHS, according to John Knodel, one of the principal investigators of the study, "probably underestimates the TFR, but not by a lot," adding that it was definitely well below 3 children per family.

SPECIAL SURVEY REPORT

Underlying Knodel's assertion are preliminary results from a national Survey of Population Change (SPC), which used a two-record methodology. This SPC shows a TFR of 2.7 for the 1985-1986 period. Also, the TFR based on births registered by the national vital statistics system declined 20 percent between 1981-1983 and 1985-1986. Although some small proportion of annual births are never registered, there

is reason to believe that the drop in the rate reflects a real downward trend in fertility.

In previous decades, women in rural areas of Thailand have had much higher fertility than urban women. The DHS shows that some of these differentials are narrowing. Fertility in rural areas dropped further than in the urban areas, dominated by Bangkok. For the five years preceding the survey, rural women had a TFR of 2.6, while for the two years preceding the DHS, the rural TFR was 2.4. The urban TFR was 1.7 for both periods.

The considerable urban-rural difference in TFR is striking, particularly in light of the similar levels of contraceptive use found among urban and rural married women aged 15-44 (67.8 percent and 65 percent, respectively). Further examination by the DHS report's co-authors (Napaporn Chayovan, Peer-asit Kamnuansilpa, and Knodel) has determined that the rural-urban difference in TFR is entirely attributable to the lower proportion of urban women in the reproductive ages who are married. Marital fertility of urban and rural women is almost identical.

Women were asked whether they wanted more children, and how many more they would like to have, in part to assess the unmet need for family planning. *Continued on next page*



Thai families are getting to be half the size they used to be.

Thai Fertility

Continued from preceding page

planning services. On average, one-third of the currently married women wanted more children, regardless of urban/rural residence or education. The preferred number of children was 2.8, ranging from 3.5 for women with no education to 2.3 for women with a secondary level education.

Thailand has one of the highest levels of contraceptive use in the world, about equal to that of the U.S. and many European countries. Modern, effective methods account for almost all of the family planning practiced here. For married women 15 to 49 years of age, the most popular methods are the pill (19 percent of this group), sterilization (29 percent), and injections (9 percent). A traditional method like withdrawal or periodic abstinence is used by less than 2 percent.

Compared with earlier surveys, the DHS revealed an increase in the use of injections and the IUD, and a slight increase in male sterilization. However, with almost one-third of the women aged 30 to 44 sterilized, this is clearly the primary method for Thai women who want to cease childbearing.

The DHS also provides some interesting estimates of the infant mortality rate (IMR). As with fertility, the survey may slightly underestimate mortality. It does show that an infant's survival chances decrease the older the infant's mother is, if there are 3 or more siblings, or if the infant is born less than two years after another birth. The DHS estimates Thailand's IMR at 38 deaths per 1,000 births for 1977-1987, which is lower than an estimated IMR of 41 from the 1985-1986 Survey of Population Change.

The DHS also gives some encouraging news about the health of Thai children. Although not quite reaching the national goal of universal immunization, the DHS results indicate that over 80 percent of the children have received at least one vaccination.

Thailand's National Family Planning Program is the major source of the country's contraceptive supply. Even if the above results are taken cautiously, the Program surely must stand as one of the world's most effective.

— M.K.

World Bank's Conable Voices Concern over Population Growth Effects

"It is imperative that developing countries renew and expand efforts to limit population growth," states World Bank President Barber Conable. "Population issues will be prominent in our dialogue with governments. . . . We are financing health and safe motherhood programs, and we will expand our direct support for family-related activities."

The Bank's new emphasis on population and environmental issues in its attack on poverty was outlined in Conable's Sept. 27 speech in West Berlin at the joint annual meetings of the World Bank and the International Monetary Fund. Conable, in his second year as Bank President, noted that "many countries will double their already large populations early in the next century." He acknowledged "that population policy touches upon sensitive cultural and religious values" but that rapid population growth means

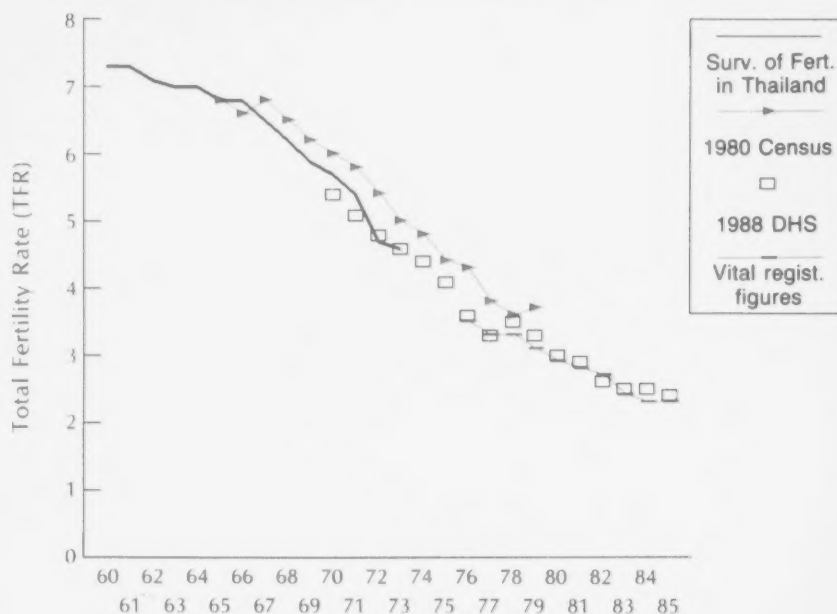
"many — perhaps most — of these new lives will be miserable, malnourished and brief. With today's population growth rates, badly-needed improvements in living standards cannot be achieved, public resources for necessary services are over-stretched, and the environment is severely damaged."

"Given the magnitude and severity of the problem," he continues "it is alarming that many governments are failing to implement sensible population policies. It is also distressing that international assistance for population activities has declined. These trends must be reversed."

The Bank's antipoverty effort must concentrate on "securing economic growth; combatting hunger; curbing excessive population growth; investing in education; and protecting the interests of the poor during the process of economic adjustment."

— R.Y.

Thai Total Fertility Rate Falling



Source: Thailand Demographic and Health Survey 1987.

U.S. Households Diversify and Shrink

The "traditional" U.S. family continues to yield ground, as the spectrum of American households continues to diversify, according to an advance report of the latest Census Bureau population survey, conducted in March 1988.

Among other things, the Bureau's survey, which involved 57,000 interviews, shows that for the first time, there are now more families without children at home — 33.2 million — than there are with children at home — 31.9 million.

A household is comprised of a person or persons who occupy a housing unit. The Census Bureau recognizes two categories of households: family (a householder and one or more of his/her family members related through blood, marriage, or adoption) and nonfamily (a householder living alone or with persons not related to him/her). As the table shows, the great majority — 84 percent — of nonfamily households consists of people living alone.

In this latest survey, 71.5 percent of households were family. This figure has slowly but steadily dropped in the U.S.; 20 years ago it stood at 82.2 percent.

Household size is also continuing to drop, as fertility falls and the proportion of nonfamily households grows. Population per household now stands at a record low of 2.64 persons, as compared to 3.20 some 20 years ago. Concomitantly, the number of households continues to increase at a faster rate (by 13 percent from 1980 to 1988, though this is a significantly lower percentage increase than for the similar period 1970-1978). Households grew by 1.6 million between 1987 and 1988 (population during the same period grew by roughly 2.2 million, but each new household, of course, contains on average more than one person).

Finally, the number of unmarried couple households (persons of opposite sex sharing living quarters, or POSSLQs) continues to rise. Whereas in 1970 there were an estimated 523,000 such households, comprising 0.8 percent of all households, today there are 2.6 million unmarried couple households, or 2.8 percent of U.S. households.

— A.H.

USDAC J. Deland



Only 2.64 people under each average roof.

The 1988 U.S. Household in a Nutshell

Group	No. (in 000s)	Percent of all households
Total households	91,066	100.0
Family households	65,133	71.5
Married-couple family	51,809	56.9
Other family, male householder	2,715	3.0
Other family, female householder	10,608	11.6
Nonfamily households	25,933	28.5
Male householder	11,310	12.4
Female householder	14,624	16.1
Living alone	21,889	24.0
Male	8,788	9.7
Female	13,101	14.4

Source: Current Population Reports, P-20, No. 432.

Data Price Increase on Hold

For the moment, the news is: There's no news on new pricing for the U.S. Census Bureau's electronic data products.

In early October, the White House's Office of Management and Budget had requested that the Bureau multiply the price of data products by five times. That is, a data tape that now sells for \$175 would henceforth go for \$875.

Although the price increase may have sounded like an attempt to adjust user fees to better reflect production costs, in fact the excess monies were to be transferred to the U.S. Treasury, not kept by the Bureau.

However, just as it was about to be implemented, the new pricing plan was shelved. On the morning of Oct. 11, Census sales employees were inter-

cepted in office hallways by their supervisors and told not to inaugurate the new prices.

Meanwhile, on Sept. 28, the so-called Dymally Bill (H.R. 3511), named for Rep. Mervyn Dymally (D-Calif.), went down to defeat in the House Committee on Post Office and Civil Service by a vote of 11 to 10. It would have compelled the Census Bureau to adjust its decennial census figures to reflect those missed in the count. But amendments requiring that the Census Bureau exclude all illegal aliens from the figures used to reapportion Congress caused many members who might have otherwise voted for it to vote nay — including those who believed in undercount adjustment.

— A.H.

DEMOGRAPHER'S PAGE

A Tale of Two States

by Carl Haub

Second only in popularity to the U.S. postwar baby boom, the rapid growth of the country's "Sun Belt" states has been often documented in press stories and journal articles. Typically, the emphasis is on migration—and with good reason. From 1980 to 1987, the South and West experienced a net inflow of over 7 million persons from other states and overseas. For the Frost Belt and Rust Belt states to the north, the situation was reversed as these states lost 2.5 million population as a result of migration.

Thus, when changes in state populations are considered, migration is the first, and often only, factor which springs to mind. It often provides the most dramatic source of population change as traditional industries wane in one part of the country even as new employment centers rise in others. Lost in the shuffle is the equally powerful force of natural increase, the result of the interplay between the birth and death rate. It is here, however, that the

differences in state population futures become quite interesting.

The year-to-year change in a state's population size is, of course, a consequence of the annual excess of births over deaths as well as its net gain or loss via migration. The latter is far more volatile than the former and for that reason is unquestionably seen as more newsworthy. The closing of a military base can cause a sudden outflow of population, as happened in Rhode Island in the 1970s, or the fortunes of a major industry, such as coal mining in West Virginia or oil in Texas, can cause sharp reverses in a state's in flow or outflow of residents.

Births Minus Deaths Equals Natural Increase

Soon, however, we can expect to see natural increase and decrease grab some of the limelight from migration. Natural increase is often overlooked as a component of state change, perhaps because no state has ever declined as a result of more annual deaths than births. At least, not yet.

It is well known that fertility in the U.S. has been below the "replacement level" for some time. In 1987, the total

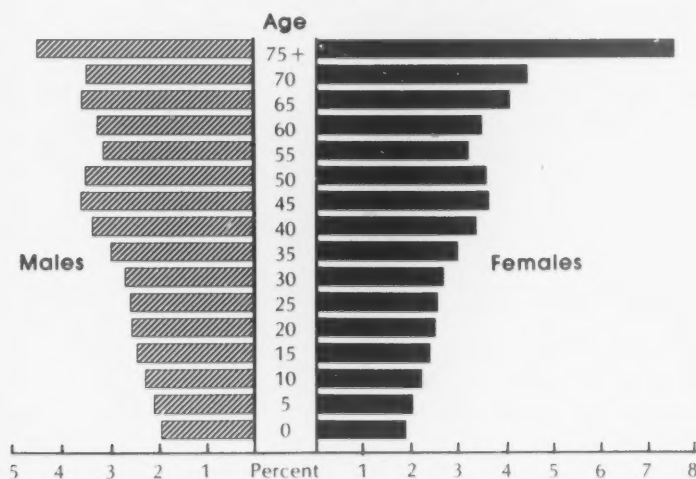
fertility rate (TFR) stood at 1.88 children per woman, meaning that, at that rate, couples will not "replace" themselves and the population will ultimately enter a period of natural decrease as deaths begin to outnumber births.

The Census Bureau's projections indicate that such a situation would be reached sometime around 2030 or 2035, assuming a continuance of low fertility. Immigration would, for a time, offset the amount of natural decrease, but eventually, the population as a whole will actually begin to shrink.

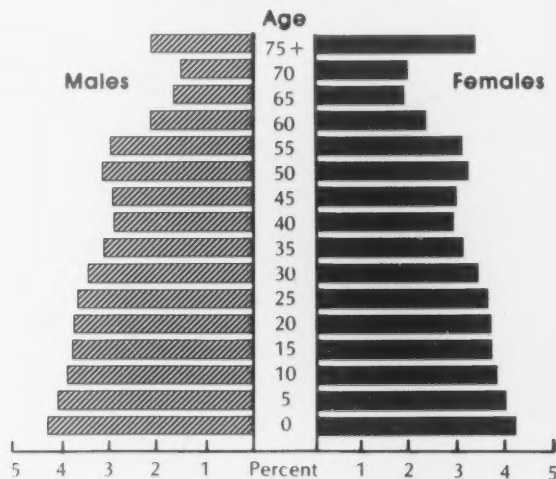
Perhaps we tend to forget that this population decline will not occur simultaneously from coast to coast. Certain states will lead the period of decline by a considerable margin. Some may never get there. This will certainly be big news in the affected states.

The natural increase/decrease factor can be a more persistent factor than migration since it is normally a relatively stable component of population change, particularly when fertility is very low. It depends directly upon a state's birth rates (conveniently summed as the TFR) and death rates (frequently expressed as life expect-

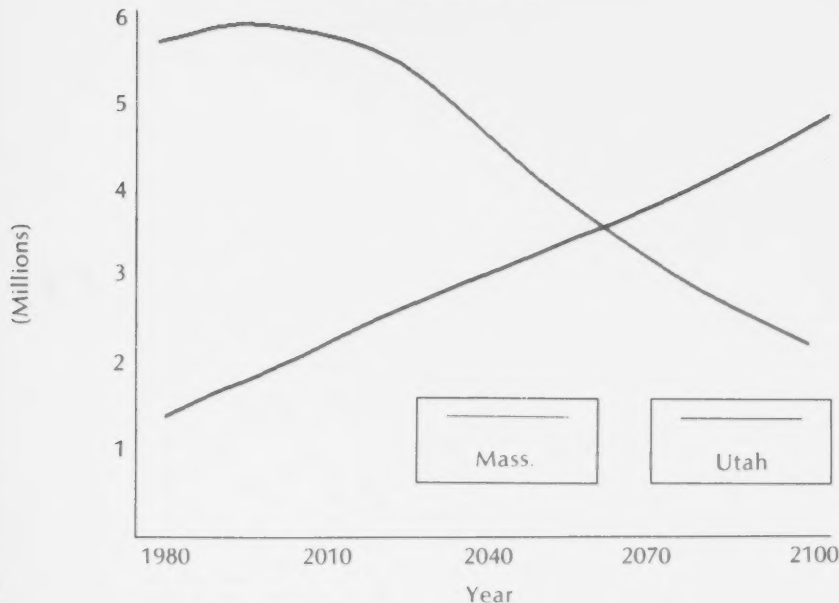
Massachusetts in 2035



Utah in 2035



Projected Populations Massachusetts and Utah 1980-2100



tancy) and upon the age distribution of the population.

To say that both a state's fertility pattern and its life expectancy do not change rapidly is a relatively risk-free proposition. They certainly *could* change sharply, but rarely do. For the most part, major fertility swings appear to have run their course in the U.S. The U.S. has had a TFR of about 1.8 for 14 years; experience of other industrialized countries suggests that birth rates drop to some specific low level and then tend to stabilize at some new "norm" of family size. Another baby boom may be waiting in the wings, but few observers expect it. Finally, death rates, already quite low, rarely change quickly but creep downward at a very gradual rate.

The annual number of births and deaths derives from birth and death rates acting in concert with the state's age distribution. Thus, if a state has an unusual preponderance of elderly, the number of deaths will be proportionally larger, all things being equal. But the point here is that a state's birth and

death rates and the pattern of its age distribution are relatively fixed factors, endemic to its demography. A state may be able to attract migrants (or repel them) by various means such as tax incentives for industry or moratoriums on housing permits, but can do little about the immediate population dynamics of its vital rates or age structure.

Bay State vs. Beehive State

To illustrate the powerful effects of these rates, let us compare two extreme examples of fertility. In 1980, Massachusetts had a TFR of 1.45 children per woman, less than half Utah's 3.22.¹ TFRs are published for states by the National Center for Health Statistics only for decennial census years.

Clearly, these two states have very different childbearing patterns. At about 1.5 children on average per woman, Massachusetts can soon expect a new development in its demography — natural decrease — while

Utah is far from the replacement level of about 2 children per woman. What does this large differential bode for each state?

To answer that question, we merely need to run a standard population projection for each. To illustrate the effects of fertility only, an assumption of zero net migration will also be assumed. (This latter assumption is actually a rather close reflection of the situation. From 1980 to 1987, Massachusetts is estimated to have had a net outflow of only -49,000 and Utah only -2,000.)

The graph shows the rather dramatic effect that continued fertility at the 1980 level would have on the comparative population sizes of these two states. Assuming a TFR of 1.45, Massachusetts would see its annual number of deaths exceed births between 1995 and 2000. By 2010-2015, the state's rate of natural decrease would be -0.3, a mirror image of the present 0.3. By mid-century, the state's 1980 population of 5.7 million would have shrunk to 4.1 million and be declining at an annual rate of -1.3 percent per year, a rate at which it then stabilizes. Extending the concept of "doubling time," we could say that, at a growth rate of 1.3 percent, Massachusetts' "halving" time would be 53 years.

Not only would Massachusetts' population settle into a protracted period of decline, it would also quickly adopt the age structure of a population top-heavy with the aged. In 1980, 12.7 percent of the state's population was age 65 or over. By 2035, that figure would rise to 27 percent. The population pyramid shown for 2035 illustrates the inverted age structure of a declining population.

Meanwhile, Utah would experience a far different demographic future with its relatively high assumed fertility.

How high should we assume Utah's fertility will remain if it remains high at all? This has become a burning issue in the state since the TFR has actually dropped since 1980. By 1986, the TFR

Continued next page

A Tale of Two States

Continued from preceding page

was estimated to have decreased to 2.6 from the 1980 level of 3.2². The cause of the decrease is not known, but several factors such as the depressed condition of the state's energy and aerospace industries in addition to the increasing labor force participation of women are offered as possible explanations.

The present decrease in Utah's fertility is not unprecedented. During the 1970s, fertility also dropped, to a TFR of 2.8 in 1973. One must also consider that the intercensal rates are estimates, i.e., not based upon census count denominators.

For the projections shown in the graph, the assumption on fertility used follows the official state assumptions. The TFR is assumed to decrease to 2.5 by 1990 and thereafter remain stable. This assumption results in Utah's population climb past that of Massachusetts during the next century until it is more than twice the Bay State's.

The significance of these projections is simply that they are primarily concerned with fertility rather than migration. Such long-range projections obviously become quite iffy the further one looks to the future. Still, the assumption of continued below-replacement fertility for Massachusetts has many precedents. Official projections for many European countries and, more recently the U.S., assume just that. Perhaps fertility will rise to, or above replacement in Massachusetts, but what would cause it? And Utah, will its fertility remain well above replacement?

In the Future

These two states are used as examples here because they are U.S. extremes (in fact Massachusetts's fertility is lower than the Netherlands', while Utah's is higher than China's). But many others divide out as being either below/above replacement. States with a TFR below 1.7 include all of New England, New York, New Jersey, Pennsylvania, Maryland, Virginia, and North Carolina. The "high" fertility states, with a TFR above 2.2, include South Dakota, Mississippi, Idaho, Wyoming,

New Mexico, and Alaska.

In the future, state fertility levels will likely be influenced by their shifting ethnic makeup. Thus states with growing proportions of Hispanics, many of them recent immigrants, can expect some upward pressure on their TFR.

In Utah, factors which operate elsewhere to influence the level of child-bearing are joined by the role of the Mormon Church, since the Church's members comprise about 70 percent of the state's population. The Church does value large families and its influence may well maintain the state's fertility at a comparatively high level. Still, any increases in women's income would also increase the opportunity costs of having a child and may introduce a new aspect of the family formation process.

This exercise brings home an important lesson: Soon, many states will have to contend with declining, aging populations which result, not from migration, but from a more "structural" demographic factor—fertility. This would certainly seem to be good news for entry-level workers, bad news for state comptrollers who will be forced to contend with the needs of the aged on the one hand and a shrinking tax base on the other. Even today, labor force shortages plague some areas. It is no accident that companies in high-tech cities of New Hampshire are scrambling for workers and fast food chains that are paying more than twice the minimum wage.

The Utah-Massachusetts scenario may, in fact, not pan out at all. But it is quite possible that some states will see their populations age and decline while others never do. Fifty states, 50 population futures—an interesting and diverse prospect.

References

1. *Birth and Fertility Rates for the United States, 1980*. Data From the National Vital Statistics System Series 21, No. 42. The National Center for Health Statistics: Hyattsville, Md. Sept. 1984.
2. *Economic and Demographic Projections 1988*, Data Resources Section, Utah Office of Planning and Budget, Salt Lake City, April 1988.

Data Sheets From All Over

A bumper crop of population wall-charts are available from all over.

- PRB has just published French- and Spanish-language versions of its own 1988 *World Population Data Sheet*.

Like the classic English-language original, the two new Data Sheets each contain basic demographic and economic data about the world's 5.128 billion people, broken down by 175 countries—some 3,000 statistical nuggets in all.

Copies of the 1988 *World Population Data Sheet* in French, Spanish, and English can be ordered from the Population Reference Bureau, Inc., Circulation Dept. P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB. Prices are \$2.00 ea.; 2-10 \$1.75 ea.; 11-50 \$1.50 ea.; over 50, \$1.25 ea. Orders for \$50 or less must be prepaid and include \$1.00 for postage and handling. Prices will increase Jan. 1, 1989.

Two entrants from other sources:

- The 1988 India Population Data Sheet, published by the Madras Communications Institute. This 24 × 18 inch sheet gives the most recent demographic data for all the States and Union Territories of India.

In India, contact: The Secretary, Madras Communications Institute, 230 21st East Street, Kamarag Nagar, Madras 600 041, India (price per data sheet: Rs.12 plus postage).

In the U.S., contact: Dr. S. B. Mani, 216, Kelly Blvd., Slippery Rock, Pa. 16057 (price per data sheet: \$2.00, plus 50 cents postage for the first sheet, 35 cents for each additional sheet).

- The Alabama Population Data Sheet, published by the Center for Demographic and Cultural Research, Auburn University at Montgomery, and released April 1987. This data sheet gives demographic data and vital statistics for every county of Alabama from 1940 to 1990.

For copies, contact: Director, Center for Demographic and Cultural Research, Auburn University at Montgomery, Montgomery, Ala. 36193.

Drought, Flood And Food

During 1988, one drought struck North America on this side of the globe while on the opposite side, drought was devastating China's agriculture.

Other world regions were not affected or actually experienced bountiful harvests. India had a satisfactory year, for example, and agriculture in Equatorial Africa rebounded to some extent from the devastation of previous years. In September, literally millions were made homeless when Bangladesh was battered by severe flooding, due in large part to lack of ground. Nevertheless, losses greatly outpaced gains, and the drought of 1988 is likely to result in a gradual tightening world food situation.

Writing in the Sept./Oct. *World Watch* magazine, agricultural specialist Lester R. Brown, Director of the Washington-based Worldwatch Institute, describes how world land area devoted to grain expanded 21 percent between 1950 and 1981 and since 1981 has fallen 7 percent. This 1980s decline he attributes to the abandonment of severely eroded land and the diversion of cropland to nonfarm uses.

Consequently, growth in food production in at least Africa and Latin America is falling behind population growth. Latin America's grain output per person reached a high in 1981.

Since 1967, when African grain output per person peaked, it has fallen about 15 percent. And spring rains in the parched Sahel region, besides helping crops to flourish, have also stimulated the greatest locust infestation in decades. Feeding on the renewed vegetation, locust swarms are sweeping across Mauritania, Mali, Niger, Chad, the Sudan, and Ethiopia.

The U.S. Agency for International Development's Famine Early Warning System, which monitors growing conditions in the Sahelian zone, foresees generally good growing conditions for the coming season, though food availability may be poor in northern Mali. A combination of factors in the Sudan, including flooding, could lead to a poor harvest in 1989 that would be disastrous for that country's already tenuous agricultural economy.

—A.H.

SOFTWARE

TIGER is the U.S. Census Bureau's epic computerized map of the entire U.S., broken down into coordinates of political boundaries, census tracts and blocks, and physical features such as roads, rivers, power lines, etc. It is being prepared to facilitate data collection and analysis during the upcoming 1990 Census. (TIGER, by the way, stands for Topologically Integrated Geographic Encoding and Referencing.)

If you want to know more about TIGER, you can obtain a prototype sample right now. A TIGER/Line file for Boone County,

Mo., (which includes Columbia, Mo.) is available from the Census Bureau in two formats: A single reel of tape (1600 or 6250 bpi) in either EBCDIC or ASCII for (price \$175), including technical documentation; or one high density 5¼-inch flexible diskette for IBM ATs or compatibles (price \$60).

During the first quarter of 1989, the Census Bureau will release a precensus edition of TIGER/Line covering the entire U.S.

To order or obtain further information about TIGER/Line contact the Census Bureau's customer service at (301) 763-4100.

—A.H.

POPULATION UPDATE

Estimated United States Population:

As of July 1, 1988	246,113,000
As of July 1, 1987	243,915,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1029.

Estimated World Population:

As of November 1988	5,158,000,000
Annual growth	89,000,000

Estimated by extrapolation from the mid-1988 population on PRB's *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: June 1988

Item	12 months ending with June					
	Number		Rate			
	1988	1987	1988	1987	1986	1985
Live births	3,853,000	3,765,000	15.8	15.5	15.6	15.8
Deaths	2,168,000	2,103,000	8.9	8.7	8.7	8.8
Natural increase	1,685,000	1,662,000	6.9	6.8	6.9	7.0
Marriages	2,367,000	2,446,000	9.7	10.1	10.0	10.3
Divorces	1,158,000	1,167,000	4.7	4.8	4.9	4.9
Infant deaths	38,200	38,100	9.9	10.1	10.5	10.6
Population base (in millions)			244.5	242.2	239.9	237.3

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source. *Monthly Vital Statistics Report* (Vol. 37, No. 6) from the National Center for Health Statistics.

TAKE A NUMBER

Metro Areas On the Rise:

The Census Bureau has released its estimates of the population of metropolitan areas for 1987. During the 1980s, metro areas at twice the rate of nonmetro counties, reversing the pattern of the 1970s. The Washington, D.C. Metropolitan Statistical Area (MSA) regained the ninth position in size from the Houston Consolidated MSA (CMSA) which saw its population decrease as a result of the current misfortunes of the oil industry. The rapid growth of the metro areas of the Sunbelt is illustrated by the Los Angeles CMSA: from 1980 to 1987, about one-eighth of U.S. population growth was in the L.A. metro area alone. Other fast growers: Orlando, Fla. grew by 34 percent since 1980, rising to 935,000 in 1987; Naples, Ocala, Fort Myers-Cape Coral, and Fort Pierce, Fla., along with Austin, Tex., were the five fastest growers in terms of percent. Those metro areas grew from 38 to 49 percent in just seven years. Another notable example of rapid growth is the

Dallas-Fort Worth CMSA, which grew to 3.7 million, adding 794,000 people since 1980. A new MSA, Decatur, Ala. brought the total number to 282 (counting MSAs and CMSAs). In 1987, nearly one-half of the country's population lived in metro areas of 1 million or more, up from about one-fourth in 1950.

Here and There: ... The U.S. infant mortality rate dropped below 10 deaths per 1,000 live births for the most recent 12-month period reported (ending June 1988). It did so once before, back in November 1987. ... the *International Herald Tribune* reports that Indian health officials have become alarmed at the lack of progress in a continuing reduction in the birth rate ... in

Japan, the proportion of children under 14 has dropped below 20 percent, a first. ... a contraceptive prevalence survey is planned in Vietnam with fieldwork to have begun by May 1988. ... Mondays through Fridays account for an increasing proportion of U.S. births as the use of caesarian section rises (24 percent of all births in 1986), according to the National Center for Health Statistics; Tuesday was the leader: each Tuesday during 1986 saw an average of 11,221 births. Sundays were the least frequent with 8,507. ... in Fiscal Year 1987, legal immigration to the U.S. totaled 601,516, according to the Immigration and Naturalization service, virtually the same as in FY 1986.

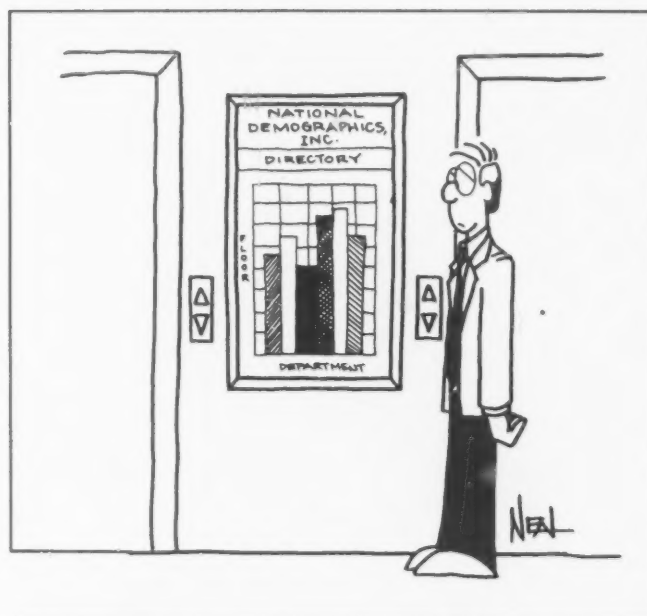
—C.H.

ADDENDA

POSITIONS/ PROFESSIONALS

The Center on Population, Gender, and Social Inequality was established at the University of Maryland in September 1988. Center activities include training and research in demography with a special focus on gender and social inequality. Harriet B. Presser is the Center's first director.

Funds are available for graduate assistantships at the Center, within the Dept. of Sociology at the M.A. and Ph.D. levels. Interested applicants should contact: Director of Graduate Studies, Dept. of Sociology, Univ. of Maryland, College Park, Md. 20742.



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CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, *POPULATION TODAY*, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

MEDICAL GEOGRAPHY, by Melinda Meade, John Florin, and Wilbert Gesler. New York: Guilford Press, 1988. 340 pages. \$35.00
ISBN 0-89862-781-8.

The health of a population results from the interaction of the people, their environment, and their beliefs and behavior. This excellent text describes each element of the population-habitat-culture triad independently and interdependently in illustrating how medical geography explains the distribution of health and disease and identifies efficient ways to intervene. There are very clear presentations of the concepts and measures of demography and their uses.

Case histories are wide ranging and include the grim "Columbian Exchange" of diseases after Columbus's first voyage, in which the Old World traded malaria, cholera, smallpox, and other diseases to the New World, and received the New World's gift of syphilis in return; studies from both developing and developed countries of shifting disease vectors and susceptibilities as land use and settlement patterns change; and disease diffusion in terms of the relationship between community size and the regularity of epidemics of measles in Iceland and England in the 1970s.

John Snow's dot map of London cholera victims in 1854 showed that the Broad Street pump was responsible for the outbreak of the disease and, since the epidemic ceased when the pump was shut, that cholera was waterborne. Today we have atlases of mortality from different cancers and attempt to determine why more people develop a certain cancer

at a particular location than elsewhere. We have also learned that infant mortality, suicide, and homicide often increase as the unemployment rate goes up. The work of medical geography – and vital population dynamics – is well, and interestingly, explained here.

— Roberta Yared

THE CIRCUMCISION OF WOMEN: A Strategy for Eradication, by Olayinka Koso-Thomas. London and Atlantic Highlands, N.J.: Zed Books, 1987. 109 pages. ISBN 0-86232-701-6

A sense of horror is evoked by this excellent review of the facts, the extent, the variations, and health outcomes of female **circumcision**. Luckily, the author, a female physician in Sierra Leone, West Africa, offers some reassurance by her subtitle, *A Strategy for Eradication*. More than half of the book is dedicated to this 20-year program which involves research, massive education and communication campaigns, retraining of health personnel and re-focused health services, heavy and well-coordinated donor aid, and concentric circles of political support.

Ironically, proponents of female circumcision maintain that the practice achieves high standards in just those areas where it does the opposite. Dr. Koso-Thomas grouped these reasons in 10 categories: 1) maintenance of cleanliness; 2) pursuance of aesthetics; 3) prevention of still births; 4) promotion of social and political cohesion; 5) prevention of promiscuity (controlling "excess" female sexuality); 6) improvement of male sexual performance and pleasure; 7) increase of matrimonial opportunities; 8) maintenance of good health; 9) preservation of virginity; and 10) enhancement of fertility.

Another irony is that women

themselves often defend the practice as an essential initiation to true membership in a group, and will ostracize those who dare to defy custom. (Yet, years later, those unfortunates suffering the worst consequences of this "surgery" are also ostracized due to unpleasant aspects of their chronic pelvic disease.) Dr. Koso-Thomas gives hope by pointing out that elsewhere, such customs as the burning of widows in India, the binding of the feet of Chinese women, and the burying alive of female infants, once practiced by Arab women, have ended. This is hopeful, yet the fact that such practices were common and that female circumcision is still common leads one to conclude that in Africa, at least, it is a dangerous thing to be born a girl.

What is the solution? One Somalian specialist has suggested that the **circumcision** ritual could be modified, if trying to halt it is still too revolutionary an idea. She believes that one could retain the sense of identity and belonging conferred by such rites of passage through a ceremony in which a girl is symbolically circumcised – perhaps by a slight nick of the clitoris. A survey of 300 women in Sierra Leone showed that some were ready to reexamine and modify the procedure in light of their new understanding of the health consequences.

Clearly, there is a lot of work to be done. Dr. Koso-Thomas acknowledges the work of Fran Hosken and of Gordon Wallace and the staff of the Population Crisis Committee in Washington, D.C., as well as others for their pioneering efforts to stop the mutilation of women. Dr. Koso-Thomas' name also belongs to the list of people who care and work for this important aspect of women's liberation.

— Elaine Murphy

SPOTLIGHT

RWANDA

Population (mid-1988 est.): 7.1 million
Land area: 10,170 sq. miles
Births per 1,000 pop.: 53
Deaths per 1,000 pop.: 16
Rate of natural increase: 3.7 percent
Total fertility rate: 8.6 children per woman
Infant mortality rate: 122 infant deaths per 1,000 live births
Life expectancy at birth: 49 years
GNP per capita (1986 est.): US \$290
Capital: Kigali

by John F. May

The population of Rwanda is fairly evenly distributed over a mountainous territory about the size of Maryland, in the Great Lakes region of East Africa. The 1978 Census and the nationwide fertility survey of 1983 provide important information on the demographic patterns and trends of this small land-locked country. Nearly 50 percent of Rwandans are less than 15 years old and 94 percent live in the rural areas. The population is divided among various ethnic groups: the Hutus (85 percent), who have the greatest involvement in political affairs, the Tutsis (14 percent), and the Twas (1 percent). The population density is about 700 persons per square mile, the highest in Sub-Saharan Africa.

The rate of natural increase is very high, even by African standards. Despite a recent outburst of malaria,

mortality—especially infant mortality—continues to decline. Unlike mortality, fertility has not yet started to decline. On the contrary, the disruption of traditional breastfeeding patterns boosts the total fertility rate. Moreover, the postpartum taboo is virtually unknown in Rwanda and only 2 percent of women aged 15-49 at risk use modern contraceptive methods. As a consequence of the mortality and fertility trends, Rwanda might soon experience the highest population growth rate in the world.

All cultivable land has been used, exhausting agricultural capacity. Unless fertility starts to decline, Rwandans might soon have to migrate abroad; this has already occurred in the past (e.g. to the Kivu region in Zaire). If at all feasible, massive external migration movements would inevitably cause problems with neighboring countries. Further complicating the issue, Rwanda has received tens of thousands of refugees from neighboring countries, most recently from Burundi.

The government of Rwanda is fully aware of the major threat population growth is posing to the development of the country. President Juvenal Habyarimana has repeatedly addressed this theme in his public speeches and in 1981 established the National Office of Population (ONAPO) to tackle the population issue. Since its creation, ONAPO has successfully sensitized the

Rwandan population about the need to adopt family planning, but thus far the provision of modern services has not reached more than a token proportion of women in union.

The Catholic Church hierarchy has also acknowledged the urgency of advocating responsible parenthood in Rwanda, but wishes to promote only natural family planning methods to achieve this goal. This could affect fast implementation of an effective family planning program in Rwanda, especially since the Catholic Church operates about half of all medical facilities in the country.

Traditional economic resources, such as the production of bananas, coffee and cattle, in addition to some mineral exports, small tourism-related activities, and a meager modern sector, will have to support the quickly growing population of Rwanda. This is then likely to require the continuation of large assistance transfers from foreign donors, including Belgium, the former colonial power. Nevertheless, scarce developmental resources might soon have to be used to address another imminent crisis in Rwanda, namely the spread of Acquired Immune Deficiency Syndrome (AIDS), primarily among the 6 percent of the population that is urban.

John F. May, Demographer, is Coordinator of Francophone Programs at The Futures Group, Washington, D.C.

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POPULATION TODAY

Vol. 16, No. 12 December 1988

FEATURES

3 The UN revises its world population projections

A quarter-billion more than projected seen by 2025, based on higher fertility in China and India; new methodology now in use

4 Congress leaves town, John G. Keane to follow

The 100th Congress passed a foreign assistance bill (which President Reagan signed) and authorized new 1990 Census questions (which he vetoed)

4 Call for PRB Visiting Scholar

5 Controversy in France

Protests temporarily halt production of the abortion-inducing pill RU 486

5 PRB Awards Dinner

Barabba explains the "CIO"; Bouvier honored

12 Togo—small nation, high fertility

With economic growth slowing in the 1980s, this West African country's leaders see national development threatened by population increase

**1988 Annual Index
begins on page 6**

DEPARTMENTS

2 From the editor's desk

2 Speaking graphically

9 Population update

11 Current readings

12 Spotlight (Togo)



China and India (pictured) show higher-than-expected fertility. (See page 3)

PRB

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FROM THE EDITOR'S DESK

In projections, fertility may not be everything, but it's hard to have a future population without it.

The latest UN Assessment (see article on facing page) shows a significant upturn in world population totals compared to the Assessment made in 1984. This is due in large part to the UN's new assumptions about the future total fertility rates (TFRs) of China and India.

Some adjustment was clearly necessary, because actual fertility figures, based on the most recent information, were beginning to show TFRs higher than those posited by most population specialists.

The graphs below plot the old and new Assessments for China and India. In both cases the 1988 Assessment shows TFRs now that are higher than what was expected back in 1984. According to this latest projection, China's

TFR will eventually cross paths with its 1984 predecessor sometime around 2005. (According to the projection, though, China's TFR will remain there, at a below-replacement level, instead of rebounding slightly, as was assumed in 1984.)

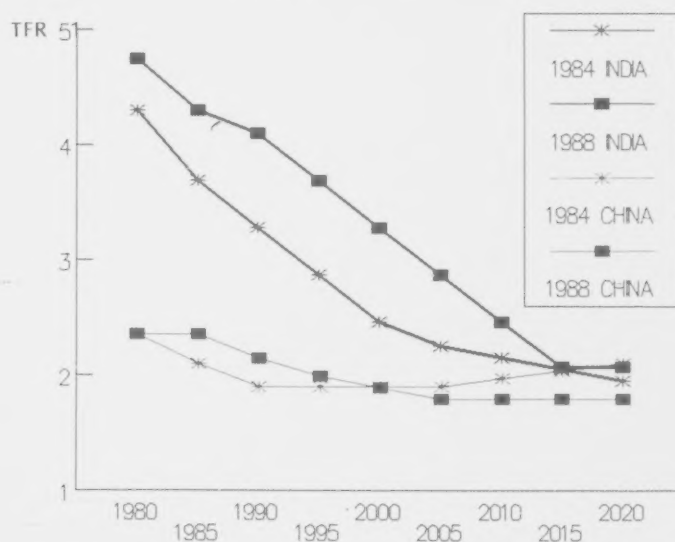
Likewise, India's new projection will catch up with its predecessor, though not until 2015.

Keep in mind that these are projections, not predictions. The main thing to remember is that while most demographers believe that TFRs of most less developed countries will eventually descend to low, industrial-country-type levels, the shape of that descent is a bit more fuzzy. The new Assessment is an early indication that the descent may not be a mathematically smooth and tidy one. How many more people will be born amidst those inevitable zigs and zags is another question.

— Art Haupt

SPEAKING GRAPHICALLY

Projected TFR for India and China From the 1984 and 1988 UN Assessments



Note: TFR (total fertility rate) is the average number of lifetime births per woman

Source: *World Population Prospects: 1988*, United Nations, forthcoming

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*Educators and students should send supporting documentation.

UN Raises its Global Projections

For the first time in over a decade, the United Nations is significantly expanding its projection of future world population size.

Previously, during the 1980s, the UN's global projections for 2000 and beyond published in its periodic Assessment had been rather stable – based as they were on lower projected growth rates resulting from observed patterns of declining fertility. But in the forthcoming 1988 Assessment – *World Population Prospects: 1988* – the UN's Population Division now projects a world population total of 6.251 billion for 2000.

This represents a notable increase – one-eighth of a billion people – over the 1984 Assessment's 6.122 billion. The change raises the new number for 2000 to essentially the level of the 1973 Assessment, which was 6.254 billion.

The 2025 figure in the new series, 8.467 billion, is also higher than the previous projection's 8.206 billion. (See table below.)

The reasons? Two major contributors to the larger population are China and India. China's birth rate rose in 1986, reversing its much-heralded downward trend. Reflecting that change, the new Assessment now lists a total fertility rate (TFR) of 2.4 lifetime children per woman for China during 1985-1990 rather than the previously assumed 2.1. Likewise, India's TFR for 1985-1990, which had been projected at 3.7 in the earlier Assessment, is now put at 4.3.

These two less developed countries (LDCs) are the two most populous countries on earth; together they contain 37 percent of the world's population, and when they sneeze, demographically speaking, the world catches the proverbial cold.

The Future Is Now

Population growth rates were generally higher during the 1970s. Projections made during that decade took into account falls in LDC fertility that were just beginning, or projected, to occur. On the basis of assumptions made about future declines in fertility, population growth rates were expected

to ebb in the then near-future.

We are now living in that future – and in a position to gauge the track record of those projections.

The orthodox assumption was that developing country birth rates would curve downward in a mathematically smooth progression until they reached the lower levels observed in developed nations. Such a pattern can now be discerned in many countries, but other nations have leveled off on their way downward while still others have experienced a (presumably temporary) rise.

India appears to be an example of the former case, China the latter. The UN's Assessment provides a number of scenarios in that two other main series are provided – the "high" and "low" series – in addition to the more frequently cited "medium" series. The full range of world population futures for 2025 presented in the new UN series extends from 7.6 billion up to 9.4 billion.

The new Assessment incorporates several changes in methodology of interest to users. For instance, new life tables allow for higher ceilings on life expectancy at birth, 87.5 years for women and 82.5 for men. Also, given the rapidly increasing availability of data in many developing countries

since the 1970s, the Population Division conducted a systematic review to estimate the length of time it might take countries to see their fertility decline to the "two-child family" replacement level. Factors taken into account included: illiteracy of women 20-24, Gross Domestic Product per capita, school enrollment ratios, governments' population policies, family planning practice, and fertility assumptions used in projections prepared by the countries themselves.

For the developed countries, many of whose fertility is already below replacement level, the Division now incorporates any available country assumptions into its own. This has led to somewhat lower assumptions on developed country birth rates in many instances.

– C.H.

World Population Prospects: 1988, prepared by the Estimates and Projections Section of the UN Population Division, is expected to be published in the early part of 1989. Summary data are available now in wallchart form: *United Nations World Population Chart 1988*, UN Sales No. E.88.XIII.7A. Inquiries may be sent to the Population Division, United Nations, New York, N.Y. 10017.

UN Population Assessments, 1984-1988 (Medium Variant)

	1984 Assessment			1988 Assessment		
	(Population in millions)					
Region/Country	1985	2000	2025	1985	2000	2025
World	4,837	6,122	8,206	4,854	6,251	8,467
More Developed Countries	1,174	1,277	1,396	1,174	1,262	1,352
Less Developed Countries	3,663	4,845	6,809	3,680	4,989	7,114
Africa	555	872	1,617	557	872	1,581
Asia	2,818	3,549	4,535	2,834	3,698	4,889
China	1,060	1,256	1,475	1,060	1,286	1,493
India	759	964	1,229	769	1,043	1,446
Latin America	405	546	779	404	540	760
Europe	492	512	524	492	509	512
USSR	279	315	368	277	308	351

Source: *World Population Prospects, 1988* and *World Population Prospects, 1984*. United Nations

WASHINGTON WATCH



Congress adjourned with a bang Oct. 22, 1988. The propitious status of being the 100th U.S. Congress may have inspired the Senate and House members to rise to new levels of congressional activity. Whatever the reason, this Congress passed all Fiscal Year 1989 appropriations bills even before the end of the fiscal year; authorized major new programs to combat illegal drug traffic and AIDS; reauthorized the National Institutes of Health; and passed numerous other bills, including several related to the 1990 Census.

FY 1989 Appropriations

Congress passed a Foreign Aid Appropriations bill with \$198 million for population development assistance (as reported in *PT*, October 1988). The final agreement on this bill provides \$500 million for the Special Africa Fund but does not include any funds earmarked for family planning or population programs within this Fund.

The National Institutes of Health, through the National Institute of Child

Health and Human Development (NICHD), provides the major source of funds for demographic research. The appropriation for NICHD is \$426 million, including funds for AIDS research at the Institute. While this represents a \$12 million increase over the President's budget request, the increase is earmarked for new programs. This means that the research program at NICHD, including the demographic and behavioral science program, will have to absorb the following cuts: competing grants (10 percent), noncompeting grants (12 percent), and Centers including Population Research Centers (13-14 percent).

No legislation to extend and revise foreign assistance has passed in the last several years; rather, Congress has appropriated foreign assistance funds as part of continuing resolutions. (When Congressional intent to continue a program is clear, Congress appropriates funds to maintain these initiatives while differences are being resolved in the authorizing legislation.)

A major push to reauthorize the for-

eign aid program is expected next year. Several recent studies have examined the existing program and recommended new directions. Fresh themes and priorities for the program are emerging: physical well-being, sustainable development, environment and natural resources, urban growth and development.

1990 Census

In a last-minute move, Congress approved legislation requiring the 1990 Census to include an Asian American and Pacific Islander checkoff. The bill also instructed the Secretary of Commerce to include one or more questions related to plumbing on the short form. The long form would request information about heating and cooling.

But as *PT* was going to press, on Nov. 9 President Reagan pocket-vetoed the bill, commenting that the questions would "increase administrative costs and add to the paperwork burden imposed on the public by the census." Office of Management and Budget (OMB) officials had urged the veto, believing that the additions had violated the good-faith compromise which OMB and Congress had previously reached regarding content and respondent burden.

Responsibility for the decennial census itself (now 16 months away) will fall to a new Director of the Bureau of the Census. The present Director, John Keane has announced that he will leave Census in January 1989. Keane, who assumed his post in 1984, is going to Notre Dame University to become Martin G. Gillen Dean of the College of Business Administration. He will also assume the Howard J. and Geraldine F. Korth chair in Strategic Management.

— Nancy McConnell

Nancy McConnell is director of the Washington, D.C., office of the Population Resource Center. The Center monitors legislative issues of concern to the Population Association of America. Neither the Center nor the Association advocates any particular population policy but works to protect funding for quality demographic research.

Call for Visiting Scholar

Applications are invited for the PRB Visiting Scholar Award for the nine-month period beginning September 1989.

The recipient of the Award, made available under a grant from the Andrew W. Mellon Foundation, will be expected to spend at least nine months at PRB's Washington, D.C. Headquarters carrying out a population-policy-related project of either domestic or international focus. Priority will be given to policy-oriented projects that attempt to synthesize work on a particular topic (including the scholar's own contribution).

The closing date for applications is Feb. 1, 1989. To apply, interested individuals should forward a brief description of their planned activities, together with a curriculum vitae and a sample of recent publications to:

Visiting Scholar Program
Population Reference
Bureau, Inc.
777 14th St., N.W. #800
Washington, D.C. 20005

For further information, contact: Bill O'Hare at (202) 639-8040.

RU 486 Turmoil

The abortion-inducing pill, RU 486 (mifepristone), continues to generate new controversy.

On Oct. 26, the French pharmaceutical firm Roussel-Uclaf S.A. announced that it was suspending sales of RU 486 in France.

Ironically, Roussel-Uclaf itself was RU 486's developer. The congestional steroid, administered orally, is considered by some to be the most significant new category of fertility-control drug since oral contraceptives were introduced in the early 1960s.

However, only weeks after the drug's Summer 1988 introduction, the firm withdrew it from the market, citing strong pressure from domestic and foreign right-to-life groups. These included the French political right, which, although relatively small in numbers, is more energetic than its counterparts elsewhere in Europe.

The suspension, however, provoked a prompt counter-outcry from women's groups, family planning organizations, and doctors. Only two days after the suspension, the French government in effect ordered the company to resume sales, "out of concern for the public health and what this pill means for women," according to the Minister of Health. And for several days, abortion was page one news in newspapers around the world.

Developed in France and first tested in 1982, RU 486 works by preventing implantation of the embryo. It does this by preventing progesterone from preparing the lining of the uterus.

It differs from prostaglandins, which are injectables that induce contractions that flush out the uterus and which have been under development since the 1970s.

— A.H.

Note

PRB members: Please note that an insert for *Population Bulletin*, Vol. 43, No. 3, "America's Elderly," is included with the December mailing.

PRB Hosts 1988 Awards Fete

The National Press Club in downtown Washington was the scene Oct. 27 as PRB held its annual Awards Dinner with many of the area's population community in attendance.

Leon F. Bouvier, Adjunct Professor at Old Dominion University and former Vice President of PRB, received the PRB Award for Outstanding Contributions in Communicating Population Information to Policy Audiences. Presenting the Award to Bouvier, Rep. James H. Scheuer (D-N.Y.) praised him for his communication talents, evinced by his early recognition of the importance of applied demography and his instruction of "a whole generation of demographers through the PRB intern program."

Bouvier expressed his pride in the field of demography, commenting how he abhorred bland rubrics such as "population studies" or "population discipline." He urged demographers to enter the policymaking process more boldly. "It can get pretty rough out there," he acknowledged, but "such criticism is worth it if policymakers are informed about demographic shifts."

Vincent P. Barabba, twice Census Bureau Director (1973-1976 and 1979-1981) and now executive director of marketing at General Motors, addressed the audience on the present and



Awardee Bouvier

future roles of federal statistics. The gap that often separates providers and users needs to be bridged, he said, by involving "users early and in every step of the information-gathering process." In particular, he called for creation of a new class of executive, the "chief information officer." In the mold of CEOs and CFOs, the "CIO" would be responsible for safeguarding the precious information resources of a corporation—or the U.S. Government, for that matter.

In the federal government, a CIO's role would have considerably greater scope than the Office of Management and Budget's Statistician, as the CIO would have "the authority and responsibility to bring together the providers and users of data."

Why is a CIO necessary? Because greater and more exact use is a necessity, not a luxury. "We're living in an era," Barabba said, "when the margin for error in public or private decision making is smaller than it's ever been."

During the evening's festivities, Martha Phillips, Minority Staff Director of the House Budget Committee and retiring member of PRB's Board of Trustees, was formally added to the roster of PRB Honorary Fellows.

The banquet serves each year as PRB's institutional birthday party. The nonprofit research organization was founded 59 years ago, in 1929, by population specialist Guy Irving Burch.

— A.H.



Speaker Barabba

1988 Subject Index

(Volume 16)

ABORTION

RU 486 abortion-inducing drug withdrawn, reintroduced in France (Dec. p. 5)

AFGHANISTAN

Spotlight (May p. 12)

AFRICA

The Circumcision of Women, book review

(Nov. p. 11)

Drought, locusts in Africa (Nov. p. 9)

AIDS

National AIDS survey being planned by NCHS (Mar. p. 3)

ALABAMA

Alabama Population Data Sheet (Nov. p. 8)

ALIENS

Immigration door closes after one year (June p. 4)

BABY BOOMERS

Baby boomer movies [From the Editor's Desk] (June p. 2)

Baby boomers dominate the voting-age population [Take a Number] (Mar. p. 10)

BIRTHS

Increasing number of Monday through Friday U.S. births due to cesarian section procedure [Take a Number] (Nov. p. 10)

Foreign-born women bear 13 percent of U.S. babies (Feb. p. 8)

Quebec encouraging births with new cash bonuses (July/Aug. p. 8)

BLACK AMERICANS

The Truly Disadvantaged, book review (Jan. p. 11)

BOOK REVIEWS

Banister, Judith. *China's Changing Population* (Mar. p. 11)

Bongaarts, John, Thomas Burch, and Kenneth Wachter. *Family Demography: Methods and Their Applications* (Mar. p. 11)

Brown, Lester R. ed. *Worldwatch* magazine (June p. 11)

Burtless, Gary, ed. *Work, Health, and Income Among the Elderly* (May p. 11)

Cornia, Giovanni Andrea, Richard Jolly, and Frances Stewart, eds. *Adjustment with a Human Face: Protecting the Vulnerable and Promoting Growth, Vol. 1 (A Study by UNICEF)*, (Oct. p. 11)

Dept. of International Economic and Social Affairs, United Nations. *World Population Policies* (Vol. 1) (Apr. p. 11)

Fornos, Werner. *Gaining People, Losing Ground: A Blueprint for Stabilizing World Population* (Feb. p. 11)

Korean Institute for Population and Health and Taiwan Provincial Institute of Family Planning. *Comparative Study of Fertility Control Experiences in Republic of Korea and Republic of China*, (Apr. p. 11)

Koso-Thomas, Olayinka. *The Circumcision of Women* (Nov. p. 11)

Levy, Frank. *Dollars and Dreams: The Changing American Income Distribution* (July/Aug. p. 11)

Menard, Scott W. and Elizabeth W. Moen, eds. *Perspectives on Population: An Introduction to Concepts and Issues* (Jan. p. 11)

Morrison, Charles E. *Asia-Pacific Report* (Feb. p. 11)

Oxford University Press. *A Social and Economic Atlas of India* (Oct. p. 11)

Other PRB Publications

Besides *Population Today*, PRB published the following publications in 1988, which are included in the index below. Entries for them appear in italics (e.g., See *PRB Bulletin*) under the appropriate subject headings.

Data Sheets

1988 *World Population Data Sheet* April 1988, French and Spanish editions November 1988

The United States Population Data Sheet (seventh edition) September 1988

Population Trends and Public Policy Papers

Number 14: David B. Hill and Mary M. Kent, *Election Demographics*, January 1988

Number 15: William P. O'Hare, *The Rise of Poverty in Rural America*, July 1988

Number 16: Katherine K. Wallman, *Losing Count: The Federal Statistical System*, September 1988

Number 17: Rafael Valdivieso and Cary Davis, *U.S. Hispanics*, December 1988

Occasional Papers

Leon F. Bouvier and Vernon M. Briggs, Jr., *The Population and Labor Force of New York: 1990 to 2050* (September 1988)

Population Bulletins

(reprint January 1988) Thomas W. Merrick et al., *World Population in Transition* (Vol. 41, No. 2)

Thomas W. Merrick and Stephen J. Tordella, *Demographics: People and Markets* (Vol. 43, No. 1) February 1988

Peter Hendry, *Food and Population: Beyond Five Billion* (Vol. 43, No. 2) April 1988

Beth J. Soldo and Emily M. Agree, *America's Elderly* (Vol. 43, No. 3) September 1988

John Weeks and Saad Gadalla, *The Demography of Islamic Nations* (Vol. 43, No. 4) December 1988

Population Education

Interchanges

"Demographic Illiteracy," *Interchange* (Vol. 17, No. 1) February 1988

"The Changing Face of America," *Interchange* (Vol. 17, No. 2) May 1988

"Teacher's Guide to Facts in Focus," *Interchange* (Vol. 17, No. 3) October 1988

"What is Overpopulation," *Interchange* (Vol. 17, No. 4) December 1988

Population Learning Series

Kimberly Crews and Patricia Cancellier, "U.S. Population: Charting the Change," Student Chartbook, May 1988

Kimberly Crews, "World Population: Facts in Focus," Workbook, October 1988

Ross, John A. and W. Parker Mauldin, eds. *Berelson on Population*, (Sept. p. 11)

United Nations, *World Population Trends and Policies: 1987 Monitoring Report* (Dec. p. 11)

Williams, Robin M. Jr. ed. *Sociological Forum* (June p. 11)

Wilson, William Julius. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy* (Jan. p. 11)

Winch, Donald. *Malthus* (May p. 11)

BURUNDI

Survey Report (Apr. p. 5)

BUSINESS

How population trends affect business (Feb. p. 4)

See *PRB Bulletin: Demographics: People and Markets* (published Feb.)

CAJUNS

Spotlight (June p. 12)

CALIFORNIA

Response to California's confidential marriages [Letter to the Editor] (Jan. p. 10)

CANADA

Canadian data available on diskette (Jan. p. 9)
Decline in the Canadian TFR rekindles their

debate about growth, fertility, and immigration [Take a Number] (July/Aug. p. 10)
Quebec encouraging births with new cash bonuses (July/Aug. p. 8)

CENSUS BUREAU

Bill from Dymally to adjust 1990 Census dies (Nov. p. 5)

Bill to change 1990 Census form vetoed [Washington Watch] (Dec. p. 4)

Census Bureau prepares new series of population projections for the USSR [Take a Number] (Sept. p. 10)

Census Bureau releases *The County and City Data Book 1988*, in an assortment of diskette versions [Software] (Oct. p. 9)

Controversy over number adjustment (Jan. p. 4)

Data price increase on hold (Nov. p. 5)
Household formation has changed since 1960 in the U.S. [Take a Number] (Apr. p. 10)

Master address list for the 1990 Census in the works by temporary workers at the Census Bureau [Take a Number] (June p. 10)

New Census Bureau publication explains how questions are selected and tested for decennial census [Take a Number] (Feb. p. 10)

Metro areas on the rise [Take a Number] (Nov. p. 10)
 New York loses Census Bureau case (Jan. p. 4)
 Questions for 1990 Census finalized (May p. 4)
 State growth patterns shifted a little in 1987 reports Census Bureau (Feb. p. 3)
 TIGER file sample available on diskette (Nov. p. 9)
 U.S. Hispanic population report available from Census Bureau [Take a Number] (June p. 10)

CHICAGO

Population of Chicago is not growing very quickly [Take a Number] (Oct. p. 10)

CHINA

A conversation with the head of China's Family Planning Commission [Demographer's Page] (Jan. p. 6)
China's Changing Population, book review (Mar. p. 11)
 China's population trend heads in opposite direction [Take a Number] (Apr. p. 10)
Comparative Study of Fertility Control Experiences in Republic of Korea and Republic of China, book review (Apr. p. 11)
New Population Atlas of China published by Oxford University Press (Feb. p. 10)
The People's Republic of China Population Data Sheet published by Peking University and the University of Texas (May p. 5)

COLOMBIA

Colombia reports decline in fertility [Take a Number] (Jan. p. 10)
 Survey Report (Mar. p. 5)

CONGRESS

Bill from Dymally to adjust 1990 Census dies (Nov. p. 5)
 Bill to change 1990 Census form vetoed [Washington Watch] (Dec. p. 4)
 Congressional activity will focus on negotiating appropriation levels for various federal programs (July/Aug. p. 4)
 Foreign aid bill to go to President as 100th Congress starts winding down [Washington Watch] (Oct. p. 4)
 Reapportionment of the House of Representatives in 1990 [Take a Number] (Mar. p. 10)
 U.S. foreign assistance reauthorized (Dec. p. 4)

CONTRACEPTIVES

Fertility and birth control combined on PCC's new wall chart (Jan. p. 8)
 Foreign aid bill to go to President as 100th Congress starts winding down [Washington Watch] (Oct. p. 4)
 The IUD returns to the U.S. (Jan. p. 4)
 Trinidad and Tobago reports on contraceptive methods [Take a Number] (June p. 10)
 RU 486 Turmoil (Dec. p. 5)

DATA SHEETS

Gathering data for the *World Population Data Sheet* [From the Editor's Desk] (Apr. p. 2)
 Population data, how solid are the numbers? [Demographer's Page] (May p. 6)
The People's Republic of China Population Data Sheet published by Peking University and the University of Texas (May p. 5)
U.S. Data Sheet reflects a decade of shifting regional political strength (July/Aug. p. 3)
World Data Sheet 1988 and *Metro Data Sheet* available on diskette from PRB [Softwhere] (Sept. p. 9)
World Population Data Sheet shows that global population during the late 1980s may be growing faster than expected (May p. 3)

World Population: Facts in Focus is a workbook designed by PRB to accompany the *World Population Data Sheet* (Oct. p. 10)
 See *United States Population Data Sheet* (seventh edition) (published Sept.)
 See *PRB 1988 World Population Data Sheet* (published April)

"DEMOGRAPHER'S PAGE" (Dept. of PT)

A conversation with the head of China's Family Planning Commission (Jan. p. 6)
 Alternative resources for teaching demography (Sept. p. 6)
 All about ZIP Codes (Oct. p. 6)
 Population data, how solid are the numbers? (May p. 6)
 Many of the working poor are unable to break out of poverty (Feb. p. 6)
 A tale of two states [Mass. and Utah], (Nov. p. 6)
 The beliefs of Moslems affect their demography (Mar. p. 6)
 Ultra-low fertility and its consequences (Apr. p. 6)
 Using the adjustments of William Brass in estimates of Indonesian fertility (July/Aug. p. 6)

DIVORCE

Collection of marriage and divorce data may be suspended (Feb. p. 4)
 Response to Nov. '87 From the Editor's Desk on the value of remarriage rate [Letter to the Editor] (Mar. p. 8)

ELDERLY POPULATION

America's Elderly population is aging and growing (Oct. p. 8)
 Average annual growth of elderly population in more developed and less developed countries [Speaking Graphically] (Feb. p. 2)
Work, Health, and Income Among the Elderly, book review (May p. 11)
 See *PRB Bulletin: America's Elderly* (published Sept.)

ELECTIONS

Baby boomers dominate the voting-age population [Take a Number] (Mar. p. 10)
 Presidential campaign, candidates, and the issues for 1988 (Oct. p. 3)
 Links between demography and U.S. election process explored in *Election Demographics* (Jan. p. 4)

EL SALVADOR

Fertility declines considerably in El Salvador [Take a Number] (Jan. p. 10)
 Survey Report (June p. 5)

ENVIRONMENT

Drought in Africa (Nov. p. 9)

EPIDEMIOLOGY

Medical Geography book review (Nov. p. 11)

FAMILY PLANNING

Demographic and Health Surveys from 30 developing countries are released after five years by Westinghouse's Institute for Resource Development (Apr. p. 8)
 "Mexico City policy" restricting U.S. family planning assistance dealt setback (Sept. p. 4)

FERTILITY

Fertility and birth control combined on PCC's new wall chart (Jan. p. 8)
 U.S. age-specific fertility rates by race, 1970 and 1986 [Speaking Graphically] (Sept. p. 2)
 Using the adjustments of William Brass in estimates of Indonesian fertility [Demographer's Page] (July/Aug. p. 6)
 Worldwatch reports fertility rates remain high in most less developed countries (Jan. p. 8)

FERTILITY DECLINE

China's Changing Population, book review (Mar. p. 11)
 Colombian fertility has dropped by half in less than two decades (Mar. p. 5)
 Colombia reports decline in fertility [Take a Number] (Jan. p. 10)
 Decline in the Canadian TFR rekindles their debate about growth, fertility, and immigration [Take a Number] (July/Aug. p. 10)
 Fertility declines considerably in El Salvador [Take a Number] (Jan. p. 10)
 Fertility in the U.S. may be stabilizing [Take a Number] (July/Aug. p. 10)
 How low could fertility in West Germany go? [Take a Number] (Apr. p. 10)
 Indian officials alarmed at lack of progress in reducing birth rate [Take a Number] (Nov. p. 10)
 Moroccan fertility declines [Take a Number] (Jan. p. 10)
 Ultra-low fertility and its consequences [Demographer's Page] (Apr. p. 6)
 Thailand's fertility dropping to industrialized country levels [survey report] (Nov. p. 3)

FOOD

Malthus, book review (May p. 11)
 World food production is rising and population is increasing (Apr. p. 5)
 See *PRB Bulletin: Food and Population: Beyond Five Billion* (published April)
 US AID's Famine Early Warning System (Nov. p. 9)

FOREIGN ASSISTANCE

Foreign aid bill to go to President as 100th Congress starts winding down [Washington Watch] (Oct. p. 4)
 U.S. foreign assistance reauthorized (Dec. p. 4)

FRANCE

RU 486 abortion-inducing drug withdrawn, reintroduced in France, (Dec. p. 5)
 Spotlight (Jan. p. 12)

FRENCH POLYNESIA

Spotlight (July/Aug. p. 12)

GERMANY, WEST

How low could fertility in West Germany go? [Take a Number] (Apr. p. 10)

GHANA

Survey Report (Oct. p. 5)

GUATEMALA

Survey Report (Sept. p. 5)

HISPANICS

Components of the U.S. Hispanic Population [Speaking Graphically] (Oct. p. 2)
The Hispanic Population of the United States book review (Dec. p. 11)
 U.S. Hispanic population report available from Census Bureau [Take a Number] (June p. 10)
 See *Population Trends and Public Policy Paper: U.S. Hispanics* (published Dec.)

HONG KONG

Hong Kong had the world's highest contraceptive prevalence rates in 1987 [Take a Number] (June p. 10)

HOUSEHOLDS

Household formation has changed since 1960 in the U.S. [Take a Number] (Apr. p. 10)

ICELAND

Icelandic history on the line [Speaking Graphically] (Mar. p. 2)

Continued on next page

IMMIGRATION, U.S.

Current immigration law undergoing new scrutiny (Sept. p. 3)
Immigration door closes after one year (June p. 4)
Immigration Reform and Control Act of 1986 that altered U.S. immigration policy begins to settle down (Oct. p. 5)
Legal immigration total [Take a Number] (Nov. p. 10)

INCOME

Dollars and Dreams: The Changing American Income Distribution, book review (July/Aug. p. 11)
Is the U.S. middle class vanishing in the 1980s? (Apr. p. 3)
Median income for selected groups of persons 25 years and older [Speaking Graphically] (Apr. p. 2)
Work, Health, and Income Among the Elderly, book review (May p. 11)

INDIA

India Population Data Sheet (Nov. p. 8)
Indian officials alarmed at lack of progress in reducing birth rate [Take a Number] (Nov. p. 10)
Oxford University Press, *A Social and Economic Atlas of India* (Oct. p. 11)

INDONESIA

Using the adjustments of William Brass in estimates of Indonesian fertility [Demographer's Page] (July/Aug. p. 6)

INFANT MORTALITY

Infant mortality below 10 in U.S. [Take a Number] (Nov. p. 10)
Infant mortality declines in the U.S. [Take a Number] (Apr. p. 10)
Infant mortality in the U.S. is higher than in other industrialized nations (Jan. p. 10)

ISLAM

The beliefs of Moslems affect their demography [Demographer's Page] (Mar. p. 6)

JAPAN

Japan's children under 14 less than 20 percent of nation [Take a Number] (Nov. p. 10)

KOREA

Comparative Study of Fertility Control Experiences in Republic of Korea and Republic of China, book review (Apr. p. 11)
Spotlight (Oct. p. 12)

KUWAIT

Spotlight (Feb. p. 12)

LIFE EXPECTANCY

Age-adjusted death rate for U.S. has dropped [From the Editor's Desk] (Feb. p. 2)
Upward trends in life expectancy 1960-1986 [Speaking Graphically] (June p. 2)

MALI

Survey Report (July/Aug. p. 5)

MALAYSIA

Spotlight (Mar. p. 12)

MALTHUSIANISM

Malthus, book review (May p. 11)

MARRIAGE

Collection of marriage and divorce data may be suspended (Feb. p. 4)
Response to California's "confidential marriages" [Letter to the Editor] (Jan. p. 10)
Response to Nov. '87 From the Editor's Desk on the value of remarriage rate [Letter to the Editor] (Mar. p. 8)

MASSACHUSETTS

A tale of two states [Mass. and Utah], [Demographer's Page] (Nov. p. 6)

MIDDLE CLASS

Is the U.S. middle class vanishing in the 1980s? (Apr. p. 3)

MOROCCO

Moroccan fertility declines [Take a Number] (Jan. p. 10)
Survey Report (May p. 5)

MOSLEMS

The beliefs of Moslems affect their demography [Demographer's Page] (Mar. p. 6)

NATIONAL CENTER FOR HEALTH STATISTICS (NCHS)

National AIDS survey being planned by NCHS (Mar. p. 3)

NEW ORLEANS

New Orleans hosts PAA's annual meeting (June p. 3)
Spotlight (June p. 12)

NEW YORK

New York loses Census Bureau case (Jan. p. 4)
Population and labor force of New York are changing (Sept. p. 8)
See *Occasional Paper: The Population and Labor Force of New York: 1990 to 2050* (published Sept.)

NIGERIA

Nigeria reports TFR [Take a Number] (Jan. p. 10)

OBITUARIES

Michael F. Brewer, PRB trustee dies after a long illness (Sept. p. 5)
Robert J. Lapham, a leading specialist on population and international family planning issues, dies at 58 (Mar. p. 5)

PANAMA

Spotlight (Sept. p. 12)

POLITICS

Congressional activity will focus on negotiating appropriation levels for various federal programs (July/Aug. p. 4)
Foreign aid bill to go to President as 100th Congress starts winding down [Washington Watch] (Oct. p. 4)
Presidential campaign, candidates, and the issues for 1988 (Oct. p. 3)
U.S. Data Sheet reflects a decade of shifting regional political strength (July/Aug. p. 3)

POPULANDIA

Addenda (Dec. p. 10)

POPULATION ASSOCIATION OF AMERICA (PAA)

New Orleans hosts PAA's annual meeting (June p. 3)

POPULATION DECLINE

Change in Texas population, 1981-1987 [Speaking Graphically] (June p. 2)
State growth patterns shifted a little in 1987 reports Census Bureau (Feb. p. 3)

POPULATION EDUCATION

Alternative resources for teaching demography [Demographer's Page] (Sept. p. 6)
"World Population: Facts in Focus" is a workbook designed by PRB to accompany the *World Population Data Sheet* (Oct. p. 10)
See *Population Learning Series: Demographic Illiteracy*, Interchange (published Feb.)
See *Population Learning Series: Teacher's Guide to Facts in Focus*, Interchange (published Oct.)
See *Population Learning Series: The Changing Face of America*, Interchange (published May).

See *Population Learning Series: U.S. Population: Charting the Change*, Student Chartbook (published May).

See *Population Learning Series: What Is Overpopulation*, Interchange (published Dec.)

POPULATION GROWTH

China's population trend heads in opposite direction [Take a Number] (Apr. p. 10)
How population trends affect business (Feb. p. 4)
State growth patterns shifted a little in 1987 reports Census Bureau (Feb. p. 3)
World Bank projects a world population of 10.4 billion in 2100 (Jan. p. 3)
World food production is rising and population is increasing (Apr. p. 5)
World Population Data Sheet shows that global population during the late 1980s may be growing faster than expected (May p. 3)
See *Population Learning Series: What Is Overpopulation*, Interchange (published Dec.)

POPULATION PROJECTIONS

Census Bureau prepares new series of population projections for the USSR (Sept. p. 10)
Latest UN Assessment (Dec. p. 3)
"People" projects populations for several regions and/or subgroups separately (June p. 9)
Population and labor force of New York are changing (Sept. p. 8)
Population data, how solid are the numbers? [Demographer's Page] (May p. 6)
Projecting the USSR's population (Apr. p. 9)
A tale of two states [Mass. and Utah], [Demographer's Page] (Nov. p. 6)
Latest UN assessment figures (Dec. p. 3)
U.S. regional populations 1987 and 2010 [Speaking Graphically] (Apr. p. 2)

POPULATION REFERENCE BUREAU, INC.

Annual Awards Dinner (Dec. p. 5)
Answering information requests at PRB [From the Editor's Desk] (May p. 2)
Frey named PRB Visiting Scholar for 1988-1989 (Mar. p. 10)
New membership and publication prices for 1989 (Oct. p. 8)
PRB Readership Survey leads to changes in PRB publications (July/Aug. p. 8)
World Data Sheet 1988 and *Metro Data Sheet* available on diskette from PRB [Software] (Sept. p. 9)

POVERTY

Many of the working poor are unable to break out of poverty [Demographer's Page] (Feb. p. 6)
Rural Americans are in economic trouble in the 1980s (July/Aug. p. 5)
Poverty rate holding steady in the U.S. (Sept. p. 5)

QUEBEC

Quebec encouraging births with new cash bonuses (July/Aug. p. 8)

RU 486

RU 486 abortion-inducing drug withdrawn, reintroduced in France, (Dec. p. 5)

RURAL ISSUES

Rural Americans are in economic trouble in the 1980s (July/Aug. p. 5)
See *Population Trends and Public Policy Paper "The Rise of Poverty in Rural America,"* Number 15 (published July)

RWANDA

Spotlight (Nov. p. 12)

Continued on next page

SENEGAL

Survey Report (Feb. p. 5)

SOCIOLOGY

Sociological Forum, book review (June p. 11)

"SOFTWARE" (dept. of PT)

As Easy As has Lotus-like capabilities and costs much less (Feb. p. 9)

Canadian data available on diskette (Jan. p. 9)
Census Bureau releases *The County and City Data Book 1988*, in an assortment of diskette versions (Oct. p. 9)

Database program "World" provides basic national data for almost all countries of the world (Mar. p. 9)

Lotus 1-2-3 series, *Facts-at Your Fingertips*, contains information on U.S. children, youth, and their families (May p. 9)

"PC-GLOBE" and "PC-USA" mapping and database programs are available (July/Aug. p. 9)

"People" projects populations for several regions and/or subgroups separately (June p. 9)

Population data on CD ROMs (Dec. p. 9)

TIGER file sample available on diskette (Nov. p. 9)

U.S. regional populations 1987 and 2010 [*Speaking Graphically*] (Apr. p. 2)

World Data Sheet 1988 and *Metro Data Sheet* available on diskette from PRB (Sept. p. 9)

"World Development Indicators" consists of economic and social data indicators for countries of the world (Apr. p. 9)

"SPOTLIGHT" (dept. of PT)

Afghanistan (May p. 12)

Cajuns (June p. 12)

France (Jan. p. 12)

French Polynesia (July/Aug. p. 12)

Republic of Korea (Oct. p. 12)

Kuwait (Feb. p. 12)

Malaysia (Mar. p. 12)

Panama (Sept. p. 12)

Rwanda (Nov. p. 12)

Togo (Dec. p. 12)

Zimbabwe (Apr. p. 12)

SRI LANKA

Survey Report (Jan. p. 5)

"SURVEY REPORT" (dept. of PT)

Burundi DHS (Apr. p. 5)

Colombia DHS (Mar. p. 5)

El Salvador DHS (June p. 5)

Ghana DHS (Oct. p. 5)

Guatemala DHS (Sept. p. 5)

Mali DHS (July/Aug. p. 5)

Morocco DHS (May p. 5)

Senegal DHS (Feb. p. 5)

Sri Lanka DHS (Jan. p. 5)

Thailand DHS (Nov. p. 3)

TEXAS

Change in Texas Population, 1981-1987

[*Speaking Graphically*] (June p. 2)

The People's Republic of China Population Data Sheet published by Peking University and the University of Texas (May p. 5)

THAILAND

Thailand's fertility dropping to industrialized country levels [survey report] (Nov. p. 3)

TOGO

Spotlight (Dec. p. 12)

TRINIDAD AND TOBAGO

Trinidad and Tobago reports on contraceptive methods used [Take A Number] (June p. 10)

Continued on next page

SOFTWARE

CD ROM optical disks containing population and economic data are now being produced by software developer Slater Hall Information Products (SHIP). Population data available so far: 1980 Census data consisting of a full range of population and housing characteristics for all places with a population of 10,000 or more, with all data from the Census Bureau Summary Tape file 3-C; county population estimates by age, sex, and race for 1980, 1982, and 1984; local area population and per capita income estimates; and population projections. All of the above data come on one shiny CD ROM disk, which, with the operating software that comes with it, will work with

most CD ROM disk drives.

Also included with the SHIP optical disk is Searcher 1.4, a retrieval and data management package that selects and sorts the CD ROM data and creates and exports data to other programs or to a printer.

The price for a SHIP optical disk and Searcher package is \$1200. There is a 10-percent discount for educational and non-profit institutions. Additional CD ROMs with further population data are forthcoming.

To order or to request a demo disk, contact: Slater Hall Information Products, 1522 K St. N.W., Washington, D.C. 20005. Phone (202) 682-1350.

POPULATION UPDATE

Estimated United States Population:

As of September 1, 1988	246,590,000
As of September 1, 1987	244,344,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1032

Estimated World Population:

As of December 1988	5,165,000,000
Annual growth	89,000,000

Estimated by extrapolation from the mid-1988 population on PRB's *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: July 1988

Item	12 months ending with July					
	Number		Rate			
	1988	1987	1988	1987	1986	1985
Live births	3,855,000	3,777,000	15.8	15.6	15.5	15.7
Deaths	2,168,000	2,105,000	8.9	8.7	8.7	8.8
Natural increase	1,687,000	1,672,000	6.9	6.9	6.8	6.9
Marriages	2,361,000	2,440,000	9.6	10.1	10.0	10.3
Divorces	1,156,000	1,165,000	4.7	4.8	4.9	4.9
Infant deaths	38,300	37,900	10.0	10.1	10.6	10.6
Population base (in millions)			244.7	242.4	240.1	237.5

Note: Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source: *Monthly Vital Statistics Report* (Vol. 37, No. 7) from the National Center for Health Statistics.

UNICEF

Adjustment with a Human Face: Protecting the Vulnerable and Promoting Growth, Vol. 1 (A Study by UNICEF), book review (Oct. p. 11)

UNITED STATES

All about ZIP Codes [Demographer's Page] (Oct. p. 6)
Americans change residence quite often [Take a Number] (Feb. p. 10)
America's Elderly population is aging and growing (Oct. p. 8)
Components of the U.S. Hispanic population [Speaking Graphically] (Oct. p. 2)
Current immigration law undergoing new scrutiny (Sept. p. 3)
Dollars and Dreams: The Changing American Income Distribution, book review (July/Aug. p. 11)
Federal statistical gathering and dissemination diminishes during the 1980s (Sept. p. 4)
Fertility in the U.S. may be stabilizing [Take a Number] (July/Aug. p. 10)
The Hispanic Population of the United States book review (Dec. p. 11)
Household formation has changed since 1960 in the U.S. [Take a Number] (Apr. p. 10)
Households diversify and shrink (Nov. p. 5)
Immigration Reform and Control Act of 1986 that altered U.S. immigration policy begins to settle down (Oct. p. 5)
Increasing number of Monday through Friday U.S. births due to cesarian section procedure [Take a Number] (Nov. p. 10)
Infant mortality below 10 in U.S. [Take a Number] (Nov. p. 10)
Infant mortality declines in the U.S. [Take a Number] (Apr. p. 10)
Infant mortality in the U.S. is higher than in other industrialized nations (Jan. p. 10)
Is the U.S. middle class vanishing in the 1980s? (Apr. p. 3)
"PC-GLOBE" and "PC-USA" mapping and database programs are available [Softwhere] (July/Aug. p. 9)
Metro areas on the rise [Take a Number] (Nov. p. 10)
See *Population Trends and Public Policy Paper: Losing Count: The Federal Statistical System (Number 16)* (Published Sept.)
Poverty rate holding steady in the U.S. (Sept. p. 5)
Presidential campaign, candidates, and issues for 1988 (Oct. p. 3)
Rural Americans are in economic trouble in the 1980s (July/Aug. p. 5)
Reapportionment of the House of Representatives in 1990 [Take a Number] (Mar. p. 10)
Questions for 1990 Census finalized (May p. 4)
State growth patterns shifted a little in 1987 reports Census Bureau (Feb. p. 3)
A tale of two states [Mass. and Utah], [Demographer's Page] (Nov. p. 6)
U.S. Data Sheet reflects a decade of shifting regional political strength (July/Aug. p. 3)
See *Occasional Paper: The Population and Labor Force of New York: 1990 to 2050* (published Sept.)
See *Population Trends and Public Policy Paper "The Rise of Poverty in Rural America," Number 15* (published July)
See *Population Trends and Public Policy*

Paper "Election Demographics," Number 14 (published Jan.)
See *Population Learning Series: The Changing Face of America, Interchange* (published May)
See *Population Learning Series: U.S. Population: Charting the Change, Student Chartbook* (published May)
See *PRB Bulletin: America's Elderly* (published Sept.)
See *United States Population Data Sheet* (seventh edition) (published Sept.)

USSR

Census Bureau prepares new series of population projections for the USSR [Take a Number] (Sept. p. 10)
Collision between Azeri and Armenian populations highlights *Projecting the USSR's population* (Apr. p. 9)
Soviet ethnic diversity (May p. 4)

UTAH

A tale of two states [Mass. and Utah], [Demographer's Page] (Nov. p. 6)

WESTINGHOUSE INSTITUTE FOR RESOURCE DEVELOPMENT (IRD)

Demographic and Health Surveys from 30 developing countries are released after five years by Westinghouse's Institute for Resource Development (Apr. p. 8)
See also "Survey Report"

WOMEN

The Circumcision of Women book review (Nov. p. 11)

WORLD

Commentators express concern about world demographic trends [From the Editor's Desk] (Mar. p. 2)
Database program "World" provides basic national data for almost all countries of the world [Softwhere] (Mar. p. 9)
Gaining People, Losing Ground: A Blueprint

for Stabilizing World Population, book review (Feb. p. 11)
Gathering data for the *World Population Data Sheet* [From the Editor's Desk] (Apr. p. 2)
Latest UN assessment figures (Dec. p. 3)
"PC-GLOBE" and "PC-USA" mapping and database programs are available [Softwhere] (July/Aug. p. 9)
Third World's fragile ecology and finances highlighted in Worldwatch Institute report (May p. 9)
World Bank projects a world population of 10.4 billion in 2100 (Jan. p. 3)
"World Development Indicators" consists of economic and social data indicators for countries of the world (Apr. p. 9)
World food production is rising and population is increasing (Apr. p. 5)
World Population Data Sheet available in French and Spanish (Nov. p. 8)
World Population Data Sheet shows that global population during the late 1980s may be growing faster than expected (May p. 3)
"World Population: Facts in Focus" is a workbook designed by PRB to accompany the *World Population Data Sheet* (Oct. p. 10)
Worldwatch magazine, book review (June p. 11)
See *PRB 1988 World Population Data Sheet* (published April)
See *PRB Bulletin: Food and Population: Beyond Five Billion* (published April)

WORLD BANK

World Bank projects a world population of 10.4 billion in 2100 (Jan. p. 3)
World Bank's President voices population growth concerns (Nov. p. 4)

ZIMBABWE

Spotlight (Apr. p. 12)

ZIP CODES

All about ZIP Codes [Demographer's Page] (Oct. p. 6)

ADDENDA

Populandia Update



It's now been 11 years since *Population Today's* mythical island erupted from the Pacific Ocean floor (see *PT*, December 1987 and earlier issues) and became the haven for all the world's natural increase, i.e., the surplus of births over deaths. That means that currently about three out of every four births winds up in Populandia.

As a result, there are now 878,686,740 Populandians on the 400 x 400 square-mile island, which has now passed India to become the second most populous country in the world. The oldest Populandians are now within hailing distance of puberty.

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in *Current Readings*. Publishers may address review copies to Book Review Editor, *POPULATION TODAY*, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

THE HISPANIC POPULATION OF THE UNITED STATES, by

Frank D. Bean and Marta Tienda. New York: Russell Sage Foundation, 1988. 456 pages. \$42.50 (cloth) ISBN 0-87154-104-1.

Because of high rates of immigration from Latin American countries and a relatively young age structure, Hispanics are currently the fastest growing group in the U.S. Because they often share similar socioeconomic characteristics with other U.S. minority groups, Hispanics are perceived of as a homogeneous group when in fact many diverse groups compose the all-inclusive category "Hispanic population of the U.S."

Bean and Tienda, whose efforts are part of the Census Monograph Series, set out to clarify the meaning of Hispanic ethnicity in the context of U.S. society today. Within this context, they examine the differences and similarities of social, demographic, and economic characteristics among the major Hispanic subgroups: the Mexican, Puerto Rican, Cuban, and Central and South American-origin subpopulations.

As with many recent publications on Hispanics, this monograph also relies on 1980 Census data for its analysis. Although 1980 statistics are, as the authors point out, somewhat limiting for data users on the verge of the 1990s, these data provide the most comprehensive information available on social, economic, and demographic attributes of the Hispanic population in

general and the subpopulations in particular.

Rich with tables and other statistical information, this volume has no rival as a comprehensive review, which more than compensates for the lack of fresh numbers. After defining each of the major Hispanic subpopulations, their history of immigration and assimilation into U.S. society, and the limitations of measurement over time, the book focuses on analysis of trends since the 1960s.

Chapters are organized around themes of change and persistence over time, diversity and uniformity among Hispanic subgroups, and convergence and divergence of Hispanic subgroups and non-Hispanic whites and blacks. Areas of the Hispanic population that are explored include immigration; geographical distribution; marriage, family, and household; fertility patterns; education; and labor force participation and earnings.

— Audrey Singer

WORLD POPULATION TRENDS AND POLICIES: 1987

Monitoring Report, prepared by the UN Dept. of International Economic and Social Affairs. (Population Studies No. 103) New York: United Nations, 1988. 411 pages. \$47.50.

The UN's latest full monitoring report on population trends since 1983 has just been published — an important document because it provides a global, biennial review of an ongoing monitoring process that was mandated as a specialized activity of the UN in the 1974 World Population Plan of Action.

Presented within Parts I and II are: first, the results of the

monitoring of population trends and policies in population growth and structure, fertility, mortality, population distribution, and migration; and second, a review of recent global trends in the area of social and economic development.

Part III explores two special topics: fertility and women's life cycle and socioeconomic differentials in mortality. The latter section reviews the trends in developing countries based on research previously published by the UN in *Socio-economic Differentials in Child Mortality in Developing Countries* (1985). It differs from and complements the previous 15-country study, which presented results variable-by-variable, by reorganizing the results on a country basis. An erudite discussion of research activities on the "social inequality of death" in developed countries follows. It reviews the research difficulties in obtaining suitable data compounded by data protection provisions which have become more prevalent in the last decade, examines current research directions, and highlights areas where the health sector is called upon to spearhead remedial action.

The fertility of women and their life cycle provide a comparative perspective on some of the demographic features of each society which affect the role of childbearing in women's lives. The topics were clearly chosen on the basis of current interest and the availability of comparative data. This is timely reading — in keeping with the goal of effectively integrating women in development that was recommended by the 1984 International Conference on Population held in Mexico City.

— Denise Dowdell

SPOTLIGHT

Togo

Population (mid-1988 est.): 3.3 million
Land area: 21,622 sq. miles
Births per 1,000 pop.: 47
Deaths per 1,000 pop.: 14
Rate of natural increase: 3.3 percent
Total fertility rate: 6.5 children per woman
Infant mortality rate: 107 infant deaths per 1,000 live births
Life expectancy at birth: 54 years
GNP per capita (1987 est.) US \$300

by John F. May

The Republic of Togo, a former German colony and French protectorate about the size of West Virginia, is located on the southern coast of West Africa about 8 degrees north of the Equator. From a 32-mile-long Atlantic coastline, this small country's elongated boundaries stretch about 320 miles northward into the interior. Togo is surrounded by Ghana to the west, Benin to the east, and Burkina Faso to the north.

Over the last 20 years, Togo has enjoyed political stability under the rule of its President, Gen. Gnassingbe Eyadema, who, like most of the Togo army's personnel, is from the Kabye ethnic group in the north (the Kabye make up about 22 percent of the population). In contrast, many political leaders and the majority of civil servants come from the Ewe group in the south (who comprise about 35 percent).

Like most Sub-Saharan nations, Togo has experienced dramatic population increase in recent decades. As elsewhere in West Africa, levels of mortality, especially infant and child mortality, have declined sharply, although they still remain very high. Fertility also has remained constant or has even increased slightly due to the improved provision of health care for mothers and the loosening of traditional breastfeeding and postpartum taboo practices.

As a result, Togo is currently experiencing an acceleration of its demographic growth: At current rates, the population will double every 21 years. About 45 percent of the Togolese are aged under 15 years; even if fertility were to decline to replacement level today, the population would still double because of the large proportion of the population in the childbearing ages—a phenomenon known as the population momentum effect.

Over the past 20 years, Togo's government has been relatively successful in spurring development. The health-care system has been expanded substantially, as has the educational sector. Today, about 70 percent of primary-school-age children attend school. Unfortunately, with the economic crisis of the early 1980s, Togo is no longer able to sustain the pace of this effort. The flow of investment has largely dried up and servicing the external debt poses a major obstacle to continuing development efforts. Moreover, the population density of Togo is already fairly high by Sub-Saharan

standards. Nearly a quarter of the Togolese live in urban areas, and the rapid urbanization of Lomé, the capital and largest city (with over 250,000 people), and Kara in the northern region may soon further strain scarce resources.

In fact, rapid population growth is more and more perceived by Togo's leaders as a major threat to the development of the country. An important conference on Population and Development was organized in Lomé in September 1987. Based on recommendations from this conference, a group of Togolese experts prepared the draft version of a national population policy statement. First steps for the implementation of the statement's recommendations are currently underway.

For Togo's government, the task ahead remains formidable. Programs to increase public awareness about the benefits of slower population growth—both at the national and the household level—need to be implemented. In addition, the effects of current population pressures have to be contended with. For example, population could be redistributed and empty land put to cultivation, although this would require enormous investments. In fact, the expansion of family planning services (the current rate of contraceptive prevalence is about 2 percent of women at risk) is an important and challenging option, one that will benefit maternal and child health.

The forthcoming results of the Demographic and Health Survey (DHS)—the first nationwide survey of this nature—will soon enable researchers to better analyze the sociocultural and proximate determinants of fertility in Togo. This will in turn facilitate the adjustment of policy responses to the demographic challenge which faces the country.



Togolese fishermen in Atlantic surf.

John F. May, Demographer, is Coordinator of Francophone Programs at The Futures Group, Washington, D.C.

POPULATION TODAY

Vol. 17, No. 1 January 1989

FEATURES

- 3 U.S. black life expectancy falls for second straight year**
From 69.7 in 1984 to 69.4 in 1986, while life expectancy increased for whites and nation as a whole; homicide is one reason why
- 4 The world's 1 billion Moslems**
New PRB Bulletin portrays the world's fastest growing religious group
- 4 The voters who weren't there**
1988 election continues decline in U.S. voter participation
- 5 The world's fifth most populous country**
Indonesia's fertility has fallen by one-third in the past 15 years
- 6 Numbers and immigrants**
How the INS defines, counts, and analyzes arrival figures
- 8 Sam Keeny (1893-1988)**
- 8 Dog bites man**
The Census Bureau is sued on the undercount issue—again
- 8 The U.S.'s Hispanics**
The second largest minority group has its own needs, challenges, and growth patterns
- 9 ZPG on the stress of urban living**
Population group rates 192 cities on livability factors, including population
- 10 PRB celebrates its diamond jubilee**
"Telling the world about population since 1929"
- 12 Contraception, abortion, and mortality in Hungary**
Negative growth rate is unusual among East European countries

DEPARTMENTS

- 2 From the editor's desk**
- 2 Speaking graphically**
- 5 Survey Report (Indonesia)**
- 6 Demographer's page**
- 9 Softwhere**
- 9 Population update**
- 10 Take a number**
- 11 Current readings**
- 12 Spotlight (Hungary)**



The Stock Exchange in Budapest. (For other Hungarian news, see page 12.)



PRB

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FROM THE EDITOR'S DESK

"Population Bomb Is Being Defused by Affluence."

That's the engaging title of a recent *Wall Street Journal* op-ed column on population by Nobel-laureate economist Fredrich A. Hayek. Given the United Nations' recent upward adjustment of world population projections and the prospect of continued and very substantial growth in population in developing countries, Hayek's reassuring assertion holds a certain fascination.

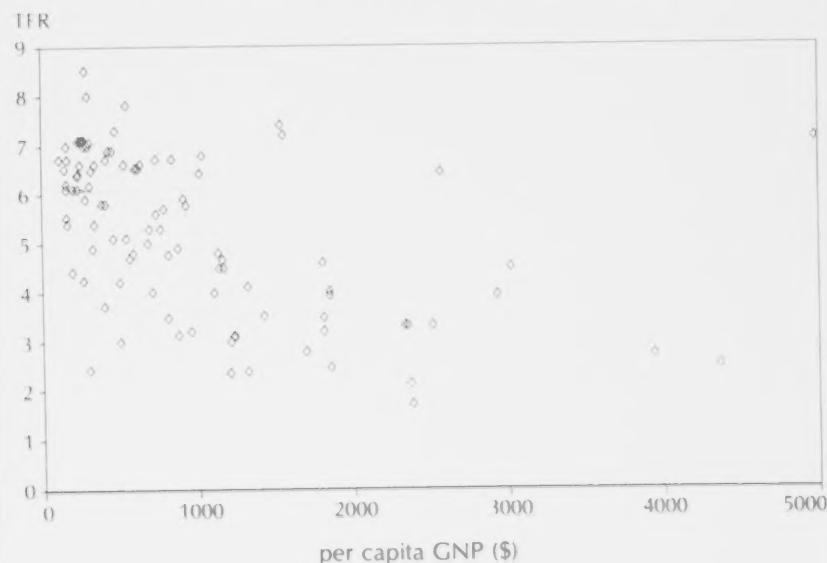
Assuredly today's more developed countries have the world's lowest fertility. (In Italy, where preferences have shifted from children to Guccis and Alfa Romeos, fertility is lowest of all with women having have an average of 1.4 lifetime children at present rates). LDCs generally have higher fertility. (In the highest case, Rwanda, per capita GNP is \$290 and total fertility is 8.5). What is less clear in Hayek's logic is how the Rwandas of the

world are likely to achieve the affluence levels required to bring their fertility rates down.

Indeed there could be a significantly lowering of LDC fertility associated with rising living standards. But as the data presented below show, a pattern of fertility decline associated with rising affluence in developing countries is still pretty hard to detect. The scattergram below plots LDCs with per capita GNP of \$5000 or less (as of 1986) and their TFR. As is often the case with scattergrams, the data points are well scattered. No dramatic correlation shows up between an LDC country's TFR and its affluence. It is eminently possible to have a relatively high-per-capita-GNP LDC with a high TFR (e.g., Oman or Algeria); it is also possible to have a poor one with a low TFR (e.g., Sri Lanka or, for that matter, China).

— Art Haupt

SPEAKING GRAPHICALLY



This scattergram plots the world's LDCs which have per-capita GNPs of less than \$5,000. (The \$5,000 limit was selected to keep the graph of manageable size; there are only about 12 LDCs with over-\$5,000 per-capita GNPs.) No dramatic correlation is seen between an LDC's TFR and its income, but there is clearly a relationship between being an LDC and being poor. Some 60 percent of these countries have per-capita GNPs of \$1,000 or less.

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U.S. Black Life Expectancy Declines

Life expectancy at birth in the U.S. reached a record high in 1986 – except for the black population.¹ Black life expectancy decreased for the second year in a row, the first time such a continuing decline has occurred (life expectancy data for blacks has been issued on an annual basis since 1970).

Age-adjusted death rates decreased in 1986 for all groups in the U.S., including blacks, for the first three major causes of death, even though they rose 1.4 percent for accidents (motor vehicle accidents rose 3.4 percent). But the black population showed higher mortality rates than the white population for most of the leading causes of death, and overall the age-adjusted death rate for blacks was 1.5 times that for the white population in 1986 as in the previous three years. (Adjusting the rate for age compensates for the general aging of the population and enables comparison of groups with different age compositions.)

The National Center for Health Statistics (NCHS) reports life expectancy at birth in 1986 as shown in the table for whites and blacks by sex.

The difference in white and black life expectancy narrowed from 7.6 in 1970 to 5.6 in 1984, but then increased to the 6.0-year difference observed in 1986.

What are the causes of this divergent pattern? Life expectancy is the average number of years that a person would live if he or she followed the age-specific death rates prevailing in the year of his or her birth.

The largest difference between the races was in the category Homicide and Legal Intervention,* with the age-adjusted death rate for blacks 5.8 times

*Legal intervention includes deaths occurring during arrests and executions



U.S. blacks' life expectancy at birth is six years less than whites' (as of 1986).

that of the white population. Some 21,731 deaths were counted under this heading in 1986, including 8,567 white males and 7,634 black males. Homicide and legal intervention, the fifth-ranked cause of death for the black male population, is not among the top 10 causes of death of the white population, and, adjusted for age, ranks 12th for the entire population. The percentage increase of deaths under this heading between 1984 and 1985 was three times as great for blacks as for whites, according to Dr. Harry Rosenberg, Chief, Mortality Branch of NCHS. This seems to agree with recognized socioeconomic patterns of poverty, including drug and alcohol use.

It may seem remarkable that homicide could contribute to the prominent difference between white and black U.S. life expectancy. But that cause, combined with higher rates for other causes of death, is what results, even when the major causes of death are

excluded.

The major causes are (in descending order) heart disease, cancer, cerebrovascular diseases (i.e., stroke), and accidents. These four causes alone accounted for 70.3 percent of all deaths in 1986. Some 71 percent of deaths among whites derived from these four major causes leaving 527,047 white deaths to be accounted for by all the other possible causes. As a proportion of those remaining causes, homicide and legal intervention account for 2.2 percent of deaths for whites.

Of black deaths, 64 percent were from the four major causes. That leaves 90,084 deaths to be accounted for. Taken against the total of all other causes, homicide and legal intervention account for 10.5 percent of "all other cause" black deaths.

It is black males, however, who are most affected. The 7,634 homicide and legal intervention deaths in this group are sufficient to constitute 14.7 percent of black male deaths that are not due to the four major causes.

The U.S. age-adjusted death rate, all races, both sexes combined, was 541.7 per 100,000 population in 1986, 709.1 for males and 406.6 for females. For

U.S. Life Expectancy by Race and Sex (years) for 1986

Sex	Total	Race		Difference (white – black)
		White	Black	
females	78.3	78.8	73.5	5.3
males	71.3	72.0	65.2	6.8
Total	74.8	75.4	69.4	6.0

U.S. Black Life Expectancy Declines

Continued from preceding page

the white population, both sexes combined, the age-adjusted rate was 518.0, males at 679.8 and females at 387.7. The rate was 781.0 for both sexes of the black population, 1,026.9 for males and 588.2 for females. The age adjusted death rates for males of all races was 1.7 times higher than for females, both for black and white populations. The age-adjusted death rate for whites declined by about 1 percent from the previous year, with no statistically significant change for the black population from 1985.

Provisional data for 1987 show U.S. life expectancy slightly higher than the 1986 figure of 74.8 years.² Life expectancy at birth increased by 0.1 year for white males, declined by 0.1 year for white females, declined 0.1 year for black males, and increased 0.2 year for black females. Black males continued to have the highest age-adjusted death rate in 1987, followed by white males, then black females, with white females having the lowest rate.

— R. Y.

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2. NCHS, "Annual Summary of Births, Marriages, Divorces, and Deaths, United States, 1987," *Monthly Vital Statistics Report*, Vol. 36, No. 13, DHHS Pub. No. (PHS)88-1120 (Hyattsville, Md. July 29, 1988).

The World's Moslems

Moslems are the world's fastest growing major religious group. Nearly 1 in every 5 persons is Moslem, an estimated world population of 984 million in 1988. In the late 20th century, there are more Moslems in Asian and African countries than in the Arab nations which saw the rise of Islam in the 7th century A.D. If the current high levels of fertility continue, almost one-quarter of the world's population could

be Moslem around the year 2020.

Professors John R. Weeks and M. Saad Gadalla of the International Population Center at San Diego State University in California analyze and discuss these and other facets of the world's Moslem population in "The Demography of Islamic Nations," PRB's just-issued *Population Bulletin*. There are 40 countries, including the world's fifth most populous, Indonesia, and Albania in Europe, with a population 50-100 percent Moslem, and another 7 countries, including Nigeria and Malaysia, ranging from 25-49 percent Moslem. In addition, there are 9 countries each with more than 2 million Moslems who total less than 25 percent of their total population, such as the Soviet Union, China, Yugoslavia, and India.

The authors find that the Islamic nations tend to be further behind in the demographic transition than other groups of nations, with the highest fertility levels, the highest mortality, and the highest rates of natural increase, even when compared with other, non-Islamic developing countries. However, they believe these demographic trends stem more from the very traditional, patriarchal, agricultural nature of these societies than from Islam per se, which, contrary to some other major world religions, does not forbid contraception. The authors particularly note the low status of women in this context and the early state of economic development in general.

Crude birth rates range from North Yemen's 55 per 1,000 to the 27 per 1,000 in Indonesia and Albania, and there is an equal diversity geographically, from Sub-Saharan Africa to Asia Minor to Southeast Asia to Oceania, and in terms of income per capita, from the very rich oil producers of the Gulf and Brunei to densely populated Bangladesh and drought-and-war-stricken Ethiopia.

— R. Y.

Copies of "The Demography of Islamic Nations" by John Weeks and Saad Gadalla, the 56-page *Population Bulletin* (Vol. 43, No. 4, December 1988), can be ordered from PRB, Circulation Dept., P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB. Prices are \$4.00 per single copy, 2-10 copies, \$3.00 each, 11-50 copies, \$2.50 each, over 50, \$2.00 each. Orders for \$50.00 or less must be prepaid and include \$1.00 for postage and handling.

Voting Absentees

The 1988 election saw the U.S. voting participation drop, as barely half the eligible electorate cast their ballots in the Bush-Dukakis contest.

According to a study by the Washington-based Committee for the Study of the American Electorate, 50.16 percent of the voting-age population actually went to the polls on Nov. 8. This marks a drop from 1984, when 53.1 percent cast their votes in the Mondale-Reagan campaign, and continues a longstanding trend toward lower voter participation that began two decades ago.

Many reasons are given by commentators for the decline, including voter alienation and obstacles to voter registration. Some 84 percent of those registered actually voted, but the registered composed only 60 percent of the potential eligible population. While no exact figures are available, about 90 percent of those in the voting ages (18 and over) are legally eligible (i.e., are U.S. citizens, are not institutionalized, are not convicted felons).

The 1972 presidential election was the first one in which those 18-21 years old were allowed to vote. There was a drop in voting participation then (historically, voter participation is lower at the younger ages), but participation has continued to drop even though America is aging. About 91.6 million Americans voted in last November's election.

Commentators have attempted various demographic explanations for the chronic decline, including the influx of Hispanic immigrants during the 1980s. Curtis Gans, director of the Committee that sponsored the study, had his own opinion. "We had abysmal, vacuous elections and the people responded accordingly," he told the media.

Whatever the reason, the percentage is 12.6 percentage points below the 62.8 percent voter participation recorded in 1960, when the country was fairly tranquil by comparison with later events, and when John F. Kennedy and Richard M. Nixon were running for President.

— A.H.

SURVEY REPORT

Indonesia

The Republic of Indonesia consists of an archipelago of 13,500 islands extending across 3,000 miles of Indian and Pacific Oceans. Containing 177 million people, it is the world's fifth most populous country; over 90 million alone live on Java, the country's principal island, which has about the same area as New York state and is one of the world's most densely populated places.

Such disproportionate concentrations of population have given rise to the government's "transmigration" program in which those willing to relocate are being moved to more sparsely populated islands.

The government-sponsored family planning program in Indonesia is world renowned. Reducing the pace of population growth has long been a major national priority. From a total fertility rate (TFR) of 5.6 lifetime children per woman on average in 1967-1970, fertility has since fallen by over one-third in only 15 years.

The 1987 National Indonesia Contraceptive Prevalence Survey (NICPS) took stock of the fertility and family planning situation and reported a continuing decrease in the country's fertility to a TFR of 3.4 for the period 1983-1987. In the survey, 11,885 ever married women aged 15-49 were interviewed in provinces which included about 93 percent of the national population. The survey was conducted by the Indonesian Central Bureau of Statistics and Westinghouse's Institute for Resource Development.

Virtually all — 94 percent — of the women surveyed said that they had heard of some form of contraception, not surprising given the far-reaching and often innovative nature of the Indone-



Family planning has been highly successful in Indonesia.

sian family planning program. At the time of the survey, 42 percent of the currently married women were using a modern method and an additional 4 percent a traditional method.

The mix of contraceptive methods was quite varied. The pill was used by the largest percentage of the respondents, 14.1 percent, with IUDs next at 13.3 percent, followed by injection at 9.5 percent. Tubectomies were reported by 3.1 percent while only 0.2 percent reported being protected by their husband's vasectomy. The NICPS also investigated the quality of contraceptive use. Of the 16.2 percent of the respondents who were using the pill, 87 percent had taken it within the two days preceding the survey interview.

Despite the decrease in fertility (an even greater decline among teenagers was noted), the age "of childbearing pattern" has shown little change. The peak years are still in the 20-24 age group.

When questioned on their fertility preferences, 55 percent of

the married women said that they did not want any more children. Among the married women who were not practicing contraception, almost half did not want another birth and about one-fourth wanted to delay their next pregnancy. Thus, about three-quarters of the unprotected women had an unmet family planning need.

The consequences of continued fertility decline in the future and the timing of the decline can be seen in population projections for Indonesia. If Indonesia's TFR nears replacement level — about 2 children per couple — by the close of the century, the present population of 177 million would rise to 263 million by 2025, possibly reaching or passing 300 million before growth finally crests.

Although Indonesia has experienced dramatic fertility decline in the past several decades, the pace of future declines will play a central role in the ultimate population size of this large Southeast Asian country.

— C.H.

DEMOGRAPHER'S PAGE

All About U.S. Immigration Statistics

by Michael Hoefler

The United States admitted approximately 601,500 legal immigrants in Fiscal Year 1987 according to official records compiled by the U.S. Immigration and Naturalization Service (INS). The United States admits more immigrants than any other any country in the world; however, it is difficult to compare migration statistics across countries because of inconsistent definitions.

The United Nations Statistical Commission and other international organizations have long promoted the standardization of international migration statistics, but the numbers compiled by most countries (including the United States) do not currently conform to the UN definitions. Aliens admitted into the U.S. are counted as immigrants in the year that they are granted legal permanent residence. This primarily legal and administrative definition of immigrant admission often conflicts with the demographic definition of international immigrant admission. Refugees admitted into the United States, for example, are counted as immigrants several years after they first entered the country rather than at their time of entry.

When analyzing the INS immigration data, it is important to understand these distinctions and to be especially aware that immigrants do not necessarily physically arrive in the year that they are included in the official statistics.

Definition of International Migration

International migration is generally defined as a relatively permanent change in residence that crosses international boundaries. Nonresidents arriving in a country are called immigrants and residents departing a country are called emigrants. The UN Statistical Office defines long-term immigrants as citizens

and aliens "who have entered the country with the intention of remaining for more than one year."¹ For the United Nations, "relatively permanent" is quantified and measured by the intent to stay more than one year. The U.S. defines immigrants as aliens who have lawfully been accorded the privilege of residing permanently in the United States. Admission for permanent residence is used as a proxy measure of a "relatively permanent" change in residence.

Aliens who are lawfully admitted into the U.S. for temporary residence are called nonimmigrants. In FY 1987 over 12 million nonimmigrants were admitted; approximately 70 percent of these aliens were admitted as visitors for pleasure (tourists) who typically stayed in the U.S. for one week or less.

Comparison of UN and U.S. Definitions

Some U.S. nonimmigrants are allowed to stay in the United States for longer than a year, which classifies them as long-term immigrants under the UN definition. Nonimmigrants who typically reside in the United States for more than one year include students attending U.S. colleges and universities, nurses working at U.S. hospitals, and foreign nationals working at international organizations. While not officially counted as immigrants by the United States, it is possible to estimate their size using administrative records of nonimmigrant arrivals and departures. Recent research suggests that a minimum of 100,000 aliens admitted for temporary residence in calendar year 1983 stayed in the U.S. longer than one year.²

One use of international migration statistics is to provide data for national population estimates. Net migration to the United States must be estimated with indirect measures because the U.S. has not collected any information on the departure of legal permanent residents since 1957. Recent estimates indicate that the average flow of alien emigration since 1970 has exceeded 100,000 per year.³ The United Nations has proposed that countries measure the arrival and departure of its citizens as well as aliens in order to measure the full impact of international migration. Under the UN proposal, citizens should be counted as long-term immigrants if they intend to reside in their country of citizenship for more than one year after continuously residing outside their country for more than one year.

The United States does not track the international migration of its citizens, although indirect measures indicate that their numbers could be quite large. The U.S. Department of State has estimated that the number of U.S. citizens living abroad in 1984 was 1.8 million, and immigration records from other countries indicate that over 100,000 U.S. citizens and legal permanent residents annually emigrate from the United States.⁴ The U.S. Bureau of Census currently uses an annual emigration figure of 160,000, which includes both citizens and aliens, for computing national population estimates.

Year of Entry Compared to Year of Admission

Many immigrants reported by the INS as being legally admitted in a given

Table 1: Immigrants to U.S. Following UN Definitions: Calendar Year 1983

	Number	Type of migrant
339,186	(1)	Immigrant arrivals in calendar year 1983
78,860	(2)	Immigrant adjustments in Fiscal Years 1983-1987 who entered in calendar year 1983
99,884	(3)	Nonimmigrants admitted in calendar year 1983 who stayed one year or more and then departed in Fiscal Years 1984-87
62,048	(4)	Refugees admitted in calendar year 1983 and asylees adjusted in Fiscal Years 1983-1987 who entered in calendar year 1983
579,978		Total

Source: Kraly and Warren (Reference 2)

fiscal year actually migrated to the United States in earlier years. Approximately 30 percent of the aliens admitted for permanent residence in FY 1987 entered in earlier fiscal years. These persons consist of aliens who were admitted for temporary residence or entered illegally and later adjusted to legal permanent residence at an INS district office. The remaining 70 percent entered the United States at U.S. ports of entry with immigrant visas issued abroad by the U.S. Department of State.

Slightly under half of the aliens adjusting to permanent residence in recent years were refugees. Refugees are eligible to apply for permanent residence after they have lived in the United States for one year. Most refugees adjust their status from temporary to permanent residence within one to three years after entry, although there is no time limit for applying and some may choose not to apply. Since refugee flows tend to be sporadic, and there is a lag between the date of initial entry and the date they are counted, the number and characteristics of the immigrants counted by INS and those actually migrating in a year may be quite dissimilar for countries with large numbers of refugees. The 125,000 Cubans who entered during the Mariel Boatlift in 1980, for example, were allowed to adjust to permanent residence in 1985, five years after their initial entry.

The impact of nonrefugee adjustments on the official immigration statistics is more moderate than refugee adjustments. Even though they may not be counted in the years that they actually migrated, their effect on the number and characteristics reported each year is relatively small. One exception that will occur in the next few years involves immigrants adjusting under the two legalization programs established by the Immigration Reform and Control Act of 1986 (Public Law 99-603).

Approximately 1.7 million illegal aliens have applied for temporary resi-

Table 2: Comparison of Actual U.S. and Estimated UN Immigrant Admissions by Region of Origin: Calendar Year 1983

Region	US	UN	Difference	% diff.
All countries	552,496	579,978	27,482	5.0
Europe	60,001	88,512	28,511	47.5
Asia	271,679	254,137	-17,542	-6.5
Africa	15,355	15,570	215	1.4
Oceania	3,561	5,571	2,012	56.5
North America	165,932	171,839	5,907	3.6
Caribbean	72,307	71,041	-1,266	-1.8
Central America	23,907	24,307	400	1.7
South America	35,936	42,337	6,405	17.8

Source: Kraly and Warren (Reference 2).

dence based on their continuous residence in the United States since Jan. 1, 1982. Qualified applicants will be allowed to adjust to permanent residence over the three-year period from FY 1989-1991. Another legalization provision allows approximately 1 million aliens who have worked on perishable crops in 1985-1986 to apply for legal permanent residence in FY 1990-1991. During 1989-1991 the official number of immigrants admitted may more than double from an annual average of 600,000 to 1.3 million because of the adjustment of these legalized aliens, most of whom entered prior to 1982.

Adjustments to Official Immigration Statistics

Ellen Kraly (Colgate Univ.) and Robert Warren (INS) have attempted to use INS administrative records of immigrants and nonimmigrants to compile statistics that conform to the UN definition of long-term immigration. Their adjusted figures are not completely consistent with the UN recommendations because of data limitations, but their analysis is instructive as to the changes in the characteristics of U.S. immigrants that would result from using the UN definition. Their analysis estimates the number of long-term immigrants admitted in Calendar Year 1983. Their data set consists of the those types of migrants shown in Table 1.

As they state, their estimate must be considered a minimum number since some immigrants and asylees admitted in 1983 may adjust in future years, and

some nonimmigrants admitted in 1983 who have not yet left may also depart in future years. The number of nonrefugees adjusting their status in FY 1987, after four years residence, was approximately 65,000. If the timing of adjustments remains the same over time, then the current estimated UN immigrant admission figure may be underestimated by 65,000. As of 1987 the difference in the total number of immigrants admitted under the current U.S. and the proposed UN definitions was a relatively small 27,000 (see Table 2).

The more interesting comparisons are admissions by region of origin; Europeans increase by 47.5 percent, Oceanians increase by 56.5 percent, and Asians decrease by 6.5 percent. Most of the decreases in Asia are for countries such as Iran, Cambodia, and Vietnam, most of whose refugee arrivals occurred in the years preceding 1983. The increases from Europe and Oceania are mainly due to the inclusion of nonimmigrant visitors for pleasure or business who stayed more than one year.

Summary

Gaps in migration data collected for the U.S. limit their usefulness for studying international migration and estimating national population change. For example, no information is collected on emigration of legal permanent residents or U.S. citizens, nor is there any direct information on the "immigration" of U.S. citizens. Data

Continued on next page

Immigration Statistics

Continued from preceding page

collected on legal immigrants are based on a legal and administrative definition that often conflicts with the demographic definition of an immigrant. Despite these limitations, the INS data on immigrants and nonimmigrants, when properly used and interpreted, are important resources for analyzing the numbers and characteristics of aliens entering the United States.

References

1. United Nations, *Recommendations on Statistics of International Migration*, 1980, Series M No. 58, pp. 5-7.
2. Kraly, Ellen, and Robert Warren, *Length of Stay of Temporary Migrants and the Concepts of Long-Term Immigration and Emigration to and from the United States*, Revised version of a paper prepared for the session on Immigration to the United States. Recent Trends, Population Association of America, 1988 Annual Meeting, New Orleans, April 20-23.
3. Warren, Robert, and Ellen Kraly, *The Elusive Exodus: Emigration from the United States*, Population Trends and Public Policy Occasional Paper No. 8, March 1985, Population Reference Bureau, Washington, DC.
4. *Ibid.*, pp. 8-9.

A New Census Suit

Once again, the U.S. Census Bureau is defendant in a suit over census undercount.

The latest suit was brought last November by a group headed by New York City and including various metro areas, states, and civic organizations. It calls for the Bureau to adjust the count of the 1990 Census—now 16 months away—after conducting a postcensal survey to calculate the estimated under-enumeration in the national head count.

The jurisdictions' interest in the census is due to the crucial role the decennial census plays in congressional apportionment and federal funding formulas to localities.

The Dept. of Commerce has resisted all attempts—including legislation pending before Congress—to change the methodology of the national head count. It has pledged to make the 1990 Census the most accurate ever, through newly automated procedures to ensure all possible households are canvassed, and public relations to encourage cooperation, particularly among minority groups considered vulnerable to undercounting.

The Bureau also cites constitutional

problems with adjustment. The Constitution specifies "counting the whole number of persons in each State;" whether "count" can be taken to mean "count-heads-and-then-adjust" (or even "count-heads-and-then-impute") is an issue on which the courts have yet to make a definitive ruling.

—A.H.

20 Million U.S. Hispanics

The 20 million U.S. Hispanics are the nation's second most populous minority group. Although residing in every state, the great majority are highly concentrated geographically—over half the U.S.'s Hispanics live in California and Texas alone; 89 percent live in just nine states.

In part because of this geographic concentration, Hispanics have been largely a concern of state politicians. But as their number and concerns grow, this group will present challenges to U.S. policymakers in nearly every area, but most urgently in education, job training, and welfare.

In the latest PRB Policy report, "U.S. Hispanics: Challenging Issues for the

1990s," authors Rafael Valdivieso and Cary Davis describe the present status, special characteristics, and future prospects of this important population group. In particular, they describe the many ways in which having a large Spanish-speaking population may affect the U.S. and the market potential of this largely untapped \$130 billion market.

In addition, the authors point out the possible effects of the 1990 Census, which is likely to show, as did the 1980 Census before it, that the actual U.S. Hispanic population is larger than previously thought. The 1990 enumeration, which provides the state population totals on which reapportionment of the U.S. House of Representatives is based, is also likely to result in more congressional clout for the very states—in the Sunbelt—where Hispanics form a significant portion of the population.

—A.H.

Copies of "U.S. Hispanics: Challenging Issues for the 1990s," by Rafael Valdivieso and Cary Davis No. 17 in PRB's *Population Trends and Public Policy* series, are available for \$6.00 per single copy, 2-10 copies, \$4.50 each, 11-50 copies, \$4.00 each, 51 or more, \$3.80 each. Orders of \$50 or less must be prepaid and include \$1.00 for postage and handling. Send order and remittance to Population Reference Bureau, Inc., Circulation Dept., PO Box 96152, Washington, DC 20090-6152. Make checks payable to PRB.

Sam Keeny (1893-1988)

Spurgeon M. Keeny died Oct. 20, 1988, at the age of 95, in Washington, DC. In that city on Dec. 3, colleagues and public health specialists gathered at a memorial service for Keeny (known to the world as Sam)—the man who pioneered children's health and family planning programs in Asia from the 1950s to the 1980s.

A Rhodes Scholar, the Pennsylvania-born Keeny served a long career in international humanitarian relief with the YMCA, including personally aiding POWs in Siberia during the First World War and Russian famine victims afterward. He joined UNICEF in 1948. From 1950 to 1963 he was the UN agency's Asian regional director, and his organizational efforts were instrumental in greatly reducing the scourges of malaria and tuberculosis and virtually eradicating yaws from Asia. "When UNICEF won the Nobel Peace Prize in 1965," writes Peter J. Donaldson of the National Academy of Sciences, "many thought the award belonged to Sam."

At age 70, Keeny retired from UNICEF and joined the Population

Council as its Asian representative, turning his talents and experience to improving family planning programs throughout Asia. During Keeny's tenure, these programs expanded dramatically, due in great part to his public-health management skills and understanding of less developed countries' rural societies.

In 1982 Keeny was guest of honor at PRB's annual Awards Dinner in Washington, where he received PRB's Award for Outstanding Service to the Field of Population.

Several years ago, Keeny complained to an associate that "apathy, incompetence, and inaction are killing more children today than malaria, smallpox, cholera, typhus, yaws, and malnutrition did when I started working for UNICEF in Asia in 1950." Earlier this year, when his many colleagues and friends celebrated his 95th birthday, they expressed the opinion that world conditions would improve greatly if people followed the organization commandment laid down and acted upon by Keeny himself—to "do the hard jobs first."

—A.H.

Rating U.S. Urban Stress

Stress is defined as "a physical, chemical, or emotional factor that causes bodily or mental tension and may be a factor in disease causation." Now Zero Population Growth, Inc. (ZPG), has rated all U.S. cities with over 100,000 population as to their potential "population-linked stress."

What is population-linked stress? ZPG believes this measure of the quality of modern life can be calculated as a composite of 11 variables existing in an urban area, ranging from educational attainment to crime to water quality to the level of hazardous wastes. The organization also includes population increase (a double-digit percentage change 1970-1986 would be considered stressful, for example), crowding (communities where more than 7 percent of the housing units have more than 1 person per room), and births (in stressed communities, according to ZPG, births to teenagers constitute 19 percent or more of all births, the crude birth rate is 23 per 1,000 population, and infant mortality is greater than 15 infant deaths per 1,000 live births).

Less populous cities in general and Midwestern cities in particular fared best under ZPG's criteria. Cedar Rapids, Iowa, population 108,000, was the "top-rated" city. Cities in the South fared the worst. Western cities might have rated higher, but many of them were downgraded due to air quality problems.

The wallchart shows that various conditions seem to reinforce each other: Many cities with crowding also have high rates of violent crime, for example, while air and sewerage disposal conditions are often similar in quality, according to ZPG's assessments.

ZPG, an advocacy group that promotes stable population size, is celebrating its 20th anniversary this year. ZPG's *Urban Stress Test*, consisting of a horizontal wallchart rating 192 cities and an explanatory report, is available from ZPG for \$4.95. Contact: Zero Population Growth, Inc., 1400 16th St. N.W., Suite 320, Washington, D.C. 20036.

— A.H.

SOFTWARE

FIVFIV is a statistical microcomputer program for projecting the size and components of a population.

Long employed by demographers, the program operates through screen menus and is relatively user-friendly. The user simply inputs the initial population size of each age group, together with fertility and mortality rates. Other variables, such as sex ratio at birth and migration, can also be inputted.

Once armed with these data, FIVFIV will crank out cohort-component projections, broken down by age group, by five-year

intervals for the next 35 years.

Originally a mainframe computer program, FIVFIV was adapted for the microcomputer world and can be run on an IBM PC or compatible with at least 256KB memory and one floppy disk drive. An accompanying program, SINSIN, enables the user to customize the age-group and projection intervals if desired.

FIVFIV-SINSIN and the accompanying manual can be ordered for \$25.00 from: Robert Sendek, The Population Council, One Dag Hammarskjold Plaza, New York, N.Y. 10017.

— A.H.

POPULATION UPDATE

Estimated United States Population:

As of October 1, 1988	246,821,000
As of October 1, 1987	244,567,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1029.

Estimated World Population:

As of January 1989	5,172,000,000
Annual growth	89,000,000

Estimated by extrapolation from the mid-1988 population on PRB's *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: August 1988

Item	12 months ending with August					
	Number		Rate			
	1988	1987	1988	1987	1986	1985
Live births	3,882,000	3,792,000	15.9	15.6	15.5	15.8
Deaths	2,168,000	2,115,000	8.9	8.7	8.7	8.8
Natural increase	1,714,000	1,677,000	7.0	6.9	6.8	7.0
Marriages	2,374,000	2,429,000	9.7	10.0	10.0	10.3
Divorces	1,164,000	1,164,000	4.8	4.8	4.8	5.0
Infant deaths	38,300	37,900	9.9	10.0	10.6	10.6
Population base (in millions)			244.9	242.5	240.2	237.6

Note: Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source: *Monthly Vital Statistics Report* (Vol. 37, No. 8) from the National Center for Health Statistics.

PRB: Going Like 60 in 1989

PRB turns 60 years old this year.

Founded by population pioneer Guy Irving Burch in 1929 for the purpose of "gathering, correlating, and distributing data concerning population



problems," the Population Reference Bureau, Inc., has now been carrying out its mission for six decades — serving PRB

members with some 20 publications in a year, answering questions from the public, serving as an information resource for policymakers, students, teachers, and the general public, and serving as a resource for government and nongovernmental organizations.

PRB began as a three-person operation in a room on the New York University campus back in the days of Margaret Sanger and the birth control movement — an era when the world's population was "only" 2 billion. The principal publication in its early days was the *Population Bulletin*, and Burch was involved with population issues at a time when the idea of rapid growth in the less developed world seemed remote.

Today PRB consists of an office of 40 persons (including 12 demographers) located in downtown Washington, DC. Operations now include policy analysis, public information, and detailed demographic data analysis (under PRB's fee-for-service subsidiary Decision Demographics). Through its IMPACT program funded through the U.S. Agency for International Development, it brings population research findings to Third World policymakers. After 60 years, PRB's goals remain the gathering and dissemination of the facts and implications of population trends, both in the U.S. and around the world.

In another 60 years, when world population is projected to be some 9.5 billion and world fertility may have fallen to replacement level, PRB will still have its research cut out for it.

The PRB anniversary logo above will appear on PRB publications throughout 1989.

—A.H.

TAKE A NUMBER

The 25 Most Populous Countries Ranked by Size, 1985 and Projected for 2000 and 2025

(population in millions)

1985		2000		2025	
Country	Population	Country	Population	Country	Population
1 China	1,059.5	China	1,285.9	China	1,492.6
2 India	769.2	India	1,042.5	India	1,445.6
3 Soviet Union	276.9	Soviet Union	307.7	Soviet Union	351.5
4 United States	239.3	United States	266.2	Nigeria	301.3
5 Indonesia	165.4	Indonesia	205.3	United States	300.8
6 Brazil	135.6	Brazil	179.5	Pakistan	267.1
7 Japan	120.8	Pakistan	162.5	Indonesia	257.8
8 Pakistan	103.2	Nigeria	159.1	Brazil	245.8
9 Bangladesh	101.1	Bangladesh	150.6	Bangladesh	235.0
10 Nigeria	95.2	Japan	129.1	Mexico	150.1
11 Mexico	79.4	Mexico	107.2	Japan	128.6
12 West Germany	61.0	Vietnam	83.0	Iran	122.2
13 Vietnam	60.1	Philippines	77.4	Vietnam	118.0
14 Italy	57.1	Iran	74.5	Ethiopia	112.3
15 United Kingdom	56.6	Egypt	66.7	Philippines	111.4
16 France	55.2	Turkey	66.6	Zaire	99.5
17 Philippines	55.1	Thailand	63.7	Egypt	94.0
18 Thailand	51.6	Ethiopia	61.2	Turkey	89.6
19 Turkey	50.3	West Germany	59.8	Tanzania	84.8
20 Iran	47.6	France	58.2	Thailand	80.9
21 Egypt	47.6	Italy	57.9	Kenya	77.6
22 Ethiopia	42.3	United Kingdom	57.5	Burma	72.6
23 South Korea	41.1	Burma	52.1	South Africa	63.2
24 Spain	38.6	Zaire	49.3	France	60.4
25 Burma	37.5	South Korea	48.0	Sudan	59.6

Source: Population Newsletter of the United Nations Population Division, June 1988. Rankings based on unrounded data.

ADDENDA



We're thinking of putting you on the cover.

News American Syndicate 1985

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in *Current Readings*. Publishers may address review copies to Book Review Editor, *POPULATION TODAY*, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005

AMERICAN NEIGHBORHOODS AND RESIDENTIAL DIFFERENTIATION

by Michael J. White. New York: Russell Sage Foundation, 1988. 327 pages. ISBN 0-87154-922-0 \$37.50

The U.S. decennial census provides a wealth of comprehensive and detailed information which can be utilized for sociological research, both basic and applied. Since the Census Bureau, operating under a strict budget, is limited in the amount of information it can analyze and publish, census data has in the past been made available to independent researchers for detailed analysis.

Beginning in the 1930s and continuing through the 1960s, teams of experts worked with the Census Bureau to investigate significant social, economic, and demographic developments using census data. This volume is one of a continuing series which revives this tradition of independent, sophisticated analysis of census information.

The series, called "The Population of the United States in the 1980's" is a result of efforts by the Social Science Research Council, the Russell Sage Foundation, the National Committee for Research on the 1980 Census, and the Alfred S. Sloan Foundation, with the collaboration of the U.S. Bureau of the Census. Each volume focuses on a specific facet of sociological study, e.g., family and housing, and commonly includes complex statistical and theoretical analysis of census data.

In this study of the American neighborhood, approximately 6,000 census tracts from 21 metropolitan areas were examined in detail, an analysis which included an estimated 27 million people. Although not selected randomly, the census tracts were chosen in a manner which would approximate a widely representative sample of metropolitan areas, some large and some small.

Residential differentiation was analyzed in regard to many characteristics and found to be the most sharply

defined by housing (high rises were the most separated) and race (blacks and whites in particular). A modest decline in racial segregation was observed over time. An excellent discussion of theoretical models of metropolitan structure, development and evolution is included and the models were examined in light of the structure and changes observed in the data from censuses dating back to 1940.

The results of this statistical and theoretical analysis should be of great interest to both sociologists and policy makers. The author's assessment of the social forces that shape and alter contemporary metropolitan neighborhood structure highlights the importance of such studies in the consideration of alternative public policies and programs which affect these neighborhoods.

— Judy C. Felt

THAILAND'S REPRODUCTIVE REVOLUTION: Rapid Fertility Decline in a Third-World Setting

by John Knodel, Aphichat Chamrathirong, and Nibhon Debavalya. Madison, Wis.: University of Wisconsin Press, 1987. 251 pages. \$19.95. ISBN 0-299-11054-0

This book is an in-depth case study of Thailand's fertility transition, providing a comprehensive and lucid analysis of a "reproductive revolution on a momentous scale." The Thai experience is placed within the broader theoretical concerns of demographers (and others concerned with the process of development) — demographic transition theory, ideational theories, the role of key cultural components in facilitating demographic change, and the "development vs. family planning programs" chestnut.

By any standards the changes in fertility attitudes and behavior in this predominantly rural country have been startlingly rapid and pervasive. In the decade between the late 1960s and 1970s, marital fertility fell by approximately 40 percent; contraceptive prevalence among mar-

ried women of reproductive age increased from 15 to 50 percent, reaching 65 percent by 1984. Modest differentials between socioeconomic categories now prevail: Preferred family size varies only by a fraction (2.5 and 2.3 children, respectively) between "least educated rural" and "most educated urban" women married less than five years.

Comparisons of fertility levels by education or residence category implicitly invoke the effects of (net) changes in the proximate determinants: If the stated preferred family sizes are achieved, it represents a remarkable degree of leveling in previously marked differentials, primarily through contraceptive usage. There appear to be regional factors at work — the South's higher fertility cannot be wholly explained by its composition of greater proportions of Moslems (who have higher fertility rates) — suggesting an interesting source of further investigation.

The authors' overall conclusions are cautious. Features of the Thai family planning program with its comprehensive distribution systems, and provision of a wide range of modern methods have undoubtedly been of consequence. However, the authors emphasize the synergistic relationship between aspects of the Thai cultural, socioeconomic, and demographic fabric conducive to fertility decline, besides the well organized family planning program.

Desired family size being less than actual family size at initiation of the family planning program, and high acceptance of effective permanent methods, for example, are salient features of the Thai experience which may not be typical of other developing countries or regions. The factors contributing to the success of the family planning program and the remarkably smooth fertility decline make all too patently clear many of the barriers to declines elsewhere. Well documented sources (quantitative and qualitative) make this an invaluable addition to any demographer's bookshelf.

— Gwenda Brophy

SPOTLIGHT

HUNGARY

Population (mid 1988 est.): 10.6 million
Land Area: 36,000 sq. miles
Births per 1,000 pop.: 12
Deaths per 1,000 pop.: 14
Rate of natural increase: -0.2 percent
Total fertility rate: 1.8
Infant mortality rate: 19 infant deaths per 1,000 live births
Life expectancy at birth: 70 years
GNP per capita (1986 est.) US \$2,010
Capital: Budapest

by Gwenda Brophy

Hungary, long a reform-oriented country in Eastern Europe, is currently in the process of taking major new steps toward the creation of an economy based on mixed state and private ownership. Laws on ownership, foreign investment and company taxation have recently been passed, and the framework for a Western-style market economy established, complete with a commercial banking system, stock and bond markets, and capitalist levels of taxation.

Hungary is exceptional among Eastern European countries in having a negative rate of growth, with the birth rate (12) lower than the death rate (14). For more than two decades the government has followed a vigorous policy of encouraging births through pronatalist incentives achieving modest success. However, since the 1960s Hungary has also experienced a rising death rate. This has been partly due to population aging, but also due to an increase in mortality among certain sections of the population. Age-specific death rates for males 15 years and over were all higher in 1980 than in the mid-1960s, with a marked increase for the 30-59 age group. Age-specific death rates for women aged 30-59 are beginning to display a similar trend.

Hungary's mortality rise cannot be attributed to any single cause. Possible associated factors that have been cited



include the fundamental transformation of Hungarian society since 1950 with accompanying rapid urbanization, and changes in occupational structure. The population now aged 40-59, for whom mortality has risen most, were the children and young people of the years of the Second World War and its aftermath; the deprivation suffered by these age-groups may be a factor in their death rates now.

Infant mortality, 19 per 1,000 live births, is high for the region, but has declined from 23 in 1980, indicating some success in the program to reduce it.

The relative importance of induced abortion and other proximate determinants of fertility has changed over time. The role of induced abortion in Hungary, as in Eastern Europe generally, in affecting fertility has been considerable. Data on legal induced abortion are available for Hungary for all the years since 1956 when abortion was made available upon request. The increase in the total abortion rate (which represents the number of abortions a woman would have during her reproductive life given prevailing age-specific abortion rates) following liberalizing legislation leveled at between 2.0-2.5 from the late 1950s to the early 1970s.

In 1974 a moderate restriction on abortion was imposed. This was accompanied by socioeconomic incentives to childbearing, and enacted at a time of rapidly broadening availability of contraceptives, and appears to have accelerated an

already ongoing decline in the incidence of induced abortion. By 1977 the total abortion rate had declined to 1.2, and in 1983 stood at a fraction over 1.

Despite the importance of induced abortion, the most important factor modifying fertility in Hungary in the past two decades has been contraception (even when in 1966 the total abortion rate was close to its peak, 2.5). Contraceptive prevalence increased substantially between the late 1950s and 1970s - from 58 percent in 1958 to 68 percent in 1966, reaching 73 percent (the level at which it currently stands) in 1977. The latter date is when the World Fertility Survey took place in Hungary. Although the increase between 1966 and 1977 was modest, there were significant changes in the methods used.

The pill and IUD, not used at all in 1966, accounted for almost 70 percent of contraceptive use by 1977; traditional methods, which accounted for a high proportion of use, 65 percent, in the earlier period (for 62 percent withdrawal) declined to 24 percent, 20 percent of which was withdrawal, by 1977.

Between 1966 and 1977 other main proximate determinants of fertility included a slight upward fertility trend resulting from marriage trends, while postpartum infecundity had a small and unchanging downward effect.

Hungary's total fertility rate (TFR) currently stands where it did in 1962 - at 1.8 lifetime children per woman. During the 1960s, the TFR increased slowly at first, then more quickly in the mid-1970s before a steady decade-long decline brought it back to the original figure. As the Hungarian economy undergoes further fundamental shifts, future demographic trends will prove interesting.

Gwenda Brophy is currently at PRB. She holds an M.Sc. degree in demography from the London School of Economics.

POPULATION TODAY

Vol. 17, No. 2 February 1989

FEATURES

3 Who are the homeless?

New survey gives most detailed picture yet of this hidden U.S. population, estimated to number 229,000 in the largest cities

4 Some 5 to 10 million people worldwide may be infected with the HIV virus

AIDS reports from NCHS and WHO outline the disease's global and U.S. spread

4 The global environment between two covers

World Resources on population and other matters

5 Japan's singular fertility trends and practices

Living with parents, arranged marriages, and an increase in premarital pregnancies highlight latest canvas

6 Who really won the 1988 Summer Olympics?

Raw numbers don't tell the whole story, as any statistician can tell you

8 Demographic recovery in the Midwest

As Texas's growth dwindles—the Census Bureau's latest state estimates tell all

10 Choldin named new PRB Visiting Scholar

12 Rapidly growing Benin plans a new national population policy

Only 6 percent of women presently use contraceptives

DEPARTMENTS

2 From the editor's desk

2 Speaking graphically

5 Survey Report (Japan)

6 Demographer's page

9 Softwhere

9 Population update

10 Take a number

11 Current readings

12 Spotlight (Benin)



The Olympics may be just a memory, but the stats remain. (See page 6.)



PRB

A publication of the Population Reference Bureau, Inc.

FROM THE EDITOR'S DESK

Quickly identify: Alfonso VIII, 54-40 or Fight Too late, time's up. But confess — aren't such quizzes just a bit scolding? Is this a race to accumulate wisdom or little plastic wedges?

So much for the national romance with "cultural literacy." For us, the most valuable cultural lesson we recall from high school is not 54-40 or Fight (still a source of some confusion), but the "13 Deadly Fallacies."

What are they? Why, overgeneralizing, overextrapolating, making ad hominem attacks, rotating charges on one's accuser, misconstruing cause and effect, employing false analogies, appealing to revered authority, appealing to the rabble, trusting specious statistics, arguing in circles, mistaking arbitrary premises for fact, making issues black or white, and finding guilt by association.

The dangers of the Fatal 13

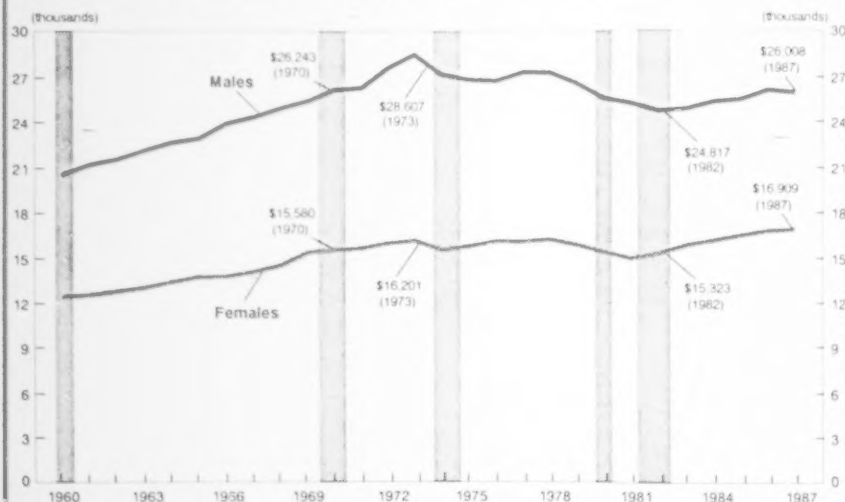
were vividly described to us by our American history teacher. She had discovered them in *Guides to Straight Thinking, with 13 Common Fallacies* (1956), a tart treatise on logic by social writer Stuart Chase. Chase's skepticism when faced with a statistic is especially salutary: Who sez so? How do they know? Does the number make sense? What's missing? Did somebody conveniently change the scale or baseline in the middle of the argument? Are we fussing over a meaningless "magic number" ("The Dow reached 2300...")?

Our teacher's point was that it's wise to keep the Fatal 13 in mind when studying American history. But they are equally applicable to the study of demography or any subject under the sun. Sometimes it's just as important to try to learn how to think as learn things to think about.

— Art Haupt

SPEAKING GRAPHICALLY

The Male-Female Wage Gap



The figures above show median earnings of year-round, full-time workers by sex in the U.S., given in 1987 dollars; the shaded areas are recessions. Interestingly, in modern times the male-female income disparity was greatest in 1973 (57 cents for every dollar), and since 1982 females have outpaced males in terms of increase in real earnings.

Source: U.S. Census Bureau, "Money Income and Poverty Status in the United States 1987," *Current Population Reports*, P-60, No. 161.

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Another Winter for the Homeless

Although much has been written about the homeless, and polls show increased public concern, the people themselves remain a shadowy and amorphous U.S. subpopulation. The very numbers continue in dispute, pegged at anywhere from 300,000 (the Reagan Administration) to 3 million (homeless activist Mitch Snyder).

Most recently, the Urban Institute has produced a nationally representative survey of the homeless, the most detailed of its kind. Taken in 1977, it estimates that there were about 229,000 homeless persons who used services for the homeless in cities with 100,000 or more population during a given seven-day period. The study was conducted under contract with the Food and Nutrition Service of the U.S. Dept. of Agriculture. Its principal purpose was to evaluate the 1986 law under which food stamps may be used by homeless persons to obtain prepared meals supplied by a nonprofit provider. It was prepared by Martha R. Burt and Barbara E. Cohen.

Conducted in winter 1987, the study's survey interviewed 1,846 homeless people in 20 cities. While the study's focus was primarily on food provision, the survey of the homeless provides an unprecedentedly detailed demographic profile of this disadvantaged segment of the U.S. population.

Some of the characteristics measured are summarized in the table on the following page. As can be seen, a significant proportion of the homeless work; they are not eating well, many (but far from a majority) report a history of mental hospitalization or treatment for chemical dependency.

Methodology

Just how is a poll of the homeless conducted? The Urban Institute survey designated a sample of 1,800 respondents. Out of the 182 U.S. cities of 100,000 or more, comprising 51 percent of the national population, they selected 20 cities. The researchers then identified all providers of meals or shelter in those cities (including soup kitchens, homeless shelters, battered women's shelters, and hotels that



Most of the homeless in the U.S. do not have histories of either institutionalization or substance abuse.

accept welfare vouchers). There are about 3,000 overall. A subcontractor supervising the data collection selected 400 of these and interviewed the providers, as well as the homeless themselves. Ultimately, interviews were conducted with 1,704 service users and 142 nonusers.

The nonusers—those not using services—were interviewed wherever they could be found, e.g., in bus stations, culverts, etc. Their conditions varied somewhat from the service-

from mental depression to nutrition. The study warns against "generalizing from New York's homeless to those homeless elsewhere in the country."

S-Night Coming

Meanwhile, a survey of the governments of 27 major cities conducted by the U.S. Conference of Mayors elicited reports that requests for emergency shelter increased 13 percent during 1988, an average of 19 percent of all shelter requests went unmet.

The mayors' survey found single men comprising 49 percent of the homeless; single women, 13 percent; families with children, 34 percent; and unaccompanied youth, 5 percent. The consensus of the surveys was that persons considered severely mentally ill account for one-quarter of the homeless population, and substance abusers, one-third.

The results of the Urban Institute survey suggest that the homeless are a varied population. They are not a simple result of deinstitutionalizing the mentally ill, nor are they all unemployable drifters from the fringes of society.

Because of the difficulty of gathering statistics in this field, the numbers are likely to continue in dispute for some time. The ultimate authoritative figures will likely come out of S-Night, the "shelter and street night" operation of the 1990 Census. On that night from 6 p.m. till midnight, enumerators will

The study
estimated 229,000
homeless in
20 cities

using population, and were generally worse, that is, they had been unemployed longer, consumed a poorer diet, and averaged only one meal a day, rather than two.

As a result of selecting the boroughs of Manhattan and Queens as interview sites, some 17 percent of the sample was interviewed in New York City. When compared against the rest of the interviewees, the homeless of New York are worse off in many categories.

Winter of Homeless

Continued from preceding page

sweep through shelters, flophouses, bus stations, and all-night movie theaters. From 2 a.m. to 4 a.m. street congregating places of the homeless – places identified in precensus checks – will be canvassed. They will politely interview people as to whether they have a home. Those answering no will be counted then and there (those answering yes will presumably be accounted for on April 1, 1990 – Census Day). But the benchmark data coming out of S-Night will provide valuable information for national and local planners, as well as finally give the country a more accurate picture of the homeless problem.

—A.H.

Composition of Homeless Persons Who Were Service Users

Composition

Single or unattached adults	77 percent
Adults with children	8 percent
Children	15 percent

Single or household

Single persons	
males	75 percent
females	8 percent
Families with children present	
female-headed	8 percent
other (two-parent or male-headed)	2 percent
Other household type	6 percent

Characteristic (age 18 or over)

Male	81 percent
White non-Hispanic	46 percent
Black	41 percent
Hispanic	10 percent
Other	3 percent

Receiving income from work

Males	25 percent
Females	18 percent

History

Mental hospitalization	19 percent
In-patient treatment for chemical dependency	33 percent
Jail for five or more days	52 percent
State or federal prison	24 percent

Usual meals per day reported

Less than one	7 percent
One	30 percent
Two	38 percent
Three	20 percent
Four	4 percent
More than four	1 percent

Median time spent homeless

10 months

Source: *Feeding the Homeless: Does the Prepared Meals Provision Help?* Urban Institute Project Report, Washington D.C. Urban Institute, Oct. 31, 1988.

AIDS Worldwide

The 59,229 AIDS cases worldwide reported to the World Health Organization in 1988 were almost double the 1987 number. WHO announced that governments have registered 132,977 cases, up from the cumulative total figure of 73,601 cases reported by 129 countries through 1987.

WHO officials emphasize that these are very incomplete figures. They estimate 300,000 to 350,000 people have acquired immune deficiency syndrome, while another 5-10 million are infected with the HIV virus. Assuming only 25 percent of HIV-infected people in 1987 will become AIDS cases, it is believed that all those infected will develop the disease. WHO projects more than a million cases by 1992. Another rule-of-thumb is that for each AIDS case, there are 3 to 5 cases of AIDS-related complex (ARC).

America's Centers for Disease Control (CDC) reported 32,399 AIDS cases in 1988 in the U.S. for a cumulative case total since June 1981 of 82,406 cases. There were 20,963 AIDS cases reported from Jan. 1 to Dec. 26, 1987. CDC officials believe there is at least 10 percent underreporting, and the number of AIDS cases is most probably higher. The cumulative 1981-1988 case total includes 1,341 children from birth to 13, 591 new cases through Dec. 24, 1988.

U.S. Mortality Figures

The National Center for Health Statistics (NCHS) has started to report deaths from AIDS for 1987, after WHO and national revisions and instructions on causes of death and completing death certificates. The NCHS provisional figure for AIDS mortality in 1987 is 13,130. The CDC received reports of 9,676 deaths due to AIDS in 1986 – again, this figure is believed to be a 10-30 percent underestimation. The CDC reports known deaths, recognized as underreported, at 10,911 from Jan. 1 to Dec. 26, 1988, with a cumulative total since 1981 of 46,134 deaths.

AIDS is the ninth leading cause of death of children 1 to 4, and the seventh cause of death for those 15 to 24. If current trends continue, AIDS will be

the fifth leading cause of death for those aged 1-24, according to a report by the National Institute of Child Health and Human Development.

—R.Y.

Population and Other Global Systems

Atop the perennial avalanche of frightening forecasts concerning the state of the global environment comes the authoritative third edition of *World Resources 1988-1989*.

Produced by the Washington-based World Resources Institute, this 372-page reference book endeavors to do nothing less than assess the world's natural resource base.

The text and some 50 tables consists of Sections I and II, which contain an executive summary overview and a review of world resources. Section III examines one world resource issue – degraded lands – while Section IV contains the data tables corresponding to the subject matter covered within the main text.

A wide panoply of issues are covered, from population and health to human settlements, to food and agriculture, forest and rangelands, wildlife and habitat, energy, freshwater, oceans and coasts, atmosphere and climate, global systems and cycles, and policies and institutions.

World Resources' plethora of tables and figures provide comparative time series for a wide spectrum of data, for example, minimum daily caloric requirements (1960-1990), adult literacy rates by gender, percent of population with access to safe drinking water and sanitation services (1980-1985), population and labor force projections (1960-2025), contraceptive prevalence and unmet needs (1961-1987), maternal and child health (1980-86). There are also tables and figures with data not ordinarily found – levels of particulate matter in the air of 41 cities around the world, for example.

Continued on page 10

SURVEY REPORT

Japan

Japan's Ninth National Fertility Survey, conducted by the Ministry of Health and Welfare in 1987, reveals a continuing increase in the age at first marriage and in the proportion of unmarried women in the prime childbearing ages.

The survey also shows that Japanese couples feel that 2.6 is the ideal number of children to have, a figure that has not changed during the past decade.

A country of mountainous islands, Japan has a population one-half the size of the U.S.'s living on 1/25th of the land area.

The survey's findings are based on a sample of 10,297 currently married women under age 50. Mean age at first marriage is 24.2 years for women and 27.2 for men. An interesting differential in age at marriage is found between two types of marriage: love matches and arranged marriages. The age at marriage is significantly younger among love-match couples than among arranged marriage couples—0.9 years younger for women and 2.2 years for men.

These differences have widened in recent years. (Today about 25 percent of all marriages in Japan are arranged by parents, relatives, friends, or marriage-arranging services. The proportion of such arranged marriages has decreased from the 60 percent recorded in the late 1940s.)

The age difference between wife and husband is 1.6 times greater among arranged marriage couples than love-match couples. The average time period from "encounter" to marriage is 23.6 months for love matches and only 4.9 months for arranged marriages.

The survey also found that after 15-19 years of marriage a

couple's average number of children is 2.17. More than 90 percent of newly married couples have their first baby within five years of marriage. Women aged 35 and over tend to avoid pregnancy, even those who have no children. These trends have not changed in the last 10 years. The percentage of women pregnant before marriage has increased from only 10 percent in the marriage cohort of the early 1960s to 25 percent in the 1980s.

In Japan, the proportion of couples living with parents immediately after marriage decreased after World War II, however, the percentage seems to have leveled out at around 30 percent during the last two decades.

Generally, socioeconomic factors such as education, occupation, and income appear to have little impact on the level of Japanese fertility. A survey study done by the Institutes of Population Problems of Japan (IPP) confirms that socioeconomic factors explain only 6 percent of the variation in number of children ever born. Couples who live in rural areas and who live with or near parents tend to have more children than others. Also, wives who marry at relatively young ages have more children than women who are older at marriage.

The study indicates the total fertility rate (TFR) drop is largely attributable to an increase in the proportion of unmarried women in the younger childbearing ages, and to late marriage.

According to the IPP's statistical study, factors affecting the "ideal" size are the number of rooms available, whether the couple lives with or near parents, and the extent of their commitment to give their children a college education.

Contrary to Western percep-



Preference for boys has fallen.

tions, parental preference for boys has been diminishing in Japan. This trend is more pronounced in the recent survey than in the previous (1982) one. Among respondents who chose 2 children as ideal, for example, preference for 2 female babies (10 percent) exceeds that for 2 male babies (4 percent). Among those who chose 3 as ideal, 52 percent opted for 2 boys and 1 girl, while 1 boy and 2 girls was the choice of 46 percent. Some 1 percent wanted 3 girls, and 0.5 percent wanted 3 boys.

More than 65 percent of couples surveyed practiced contraception. Condoms are the most popular method (80 percent) throughout all age groups and all parities. The next most preferred methods are withdrawal (16 percent) and rhythm or periodic abstinence (14 percent). Sterilization accounts for only 7 percent (women and men combined), and just 4.6 percent use IUDs. The pill (1.4 percent) cannot legally be prescribed for contraceptive purposes in Japan, a government study having cited bad side effects.

Twenty-three percent of the women surveyed have experienced at least one abortion, with 1.5 the average number of abortions.

—M.Y.

DEMOGRAPHER'S PAGE

The 1988 Olympic Games: Who Really Won?

by Leon Bouvier and Donald Smith

The 1988 Summer Olympic Games are history.

For only the second time since 1896, when the modern Games began, a developing country served as host. From South Korea's point of view, the Games of last September were unquestionably a huge success. Nonetheless, controversies erupted – the drug issue, judges' diving calls, the behavior of a few athletes. A controversy of a different sort smoldered in the U.S., fanned by those who perceived a relative lack of success of some American entries, men's basketball, for example.

On the face of it, the USSR won and the U.S. finished third – 132 medals to 94 medals – with East Germany in between. But mere medal totals don't tell the whole story, and some smaller countries felt that, person for person, they had finished better than the media gave them credit for.

So, as in so many times in the past, the social scientists must come to the rescue. Which nation really won the 1988 Games? How well did the U.S. really fare in Seoul? To answer these questions, social scientists and demographers in particular can turn to their battery of statistical tools. For example:

The "Crude Medal Rate." When demographers measure fertility, the crude birth rate (births per 1,000 population) serves as a more meaningful indicator of differentials between nations than simply comparing total numbers of births. A similar measure – the "Crude Olympic Medal Rate (CMR)" – can be applied to the Games.

(Crude, of course, is the statistical

term meaning tabulated without being broken down into classes; though it carries a trace of its conventional connotations: coarse, primitive, elemental.)

Of the 156 Olympic participant countries, 43 received at least one medal. This analysis is, however, limited to those 19 nations that captured at least 10 medals.

The crude medal rate rankings are shown in Table 1. It should come as no surprise that the CMR leader was East Germany with an amazing 6.14 medals per million population. (Romania, the 1984 "winner" according to this ranking, scored a mere 2.37 medals per million this time around.) Or, to make a bizarre vital statistics comparison, last year the average person in East Germany had a higher probability of winning a Summer Olympics medal than dying from tuberculosis.

Far behind in second place was New Zealand with 3.94 medals per million population. More populous countries are farther back. China's rate, for example, (0.03) illustrates how hard it is for an extremely populous nation to achieve a high rate when compared to a moderately sized nation like East Germany.

The USSR, while first in the total number of medals won, ranked 11th according to this measure. Its crude medal rate, however, was only 0.46. The U.S., third in total medals, was at 14th a CMR tie with Canada. (In 1984, the U.S. tied for fifth with a CMR of 0.74.) To match East Germany's rate in 1988, the U.S. would have had to win 1,530 medals.

Is the crude medal rate too crude? It can be refined somewhat by weighting medals. We arbitrarily assigned 3 points for gold medals, 2 for silver, and 1 for bronze. If we rank the countries this way, East Germany also captured first honors under this measurement. Bulgaria ranked second followed by New Zealand. The U.S. came in 13th, and generally, the rank order is quite similar to the unweighted ranking observed in Table 1.

These two rates are superior to a simple medal count. In demography, crude rates are crude because they include the entire population in the denominator – not just the people "at risk." A "pure" demographic rate, on the other hand, should include in its denominator only those individuals capable of performing what is included in the numerator.

Table 1: Crude Medal Rate (per 1 million population)

Country	Total Medals	Population (millions)	Rate
East Germany	102	16.6	6.14
New Zealand	13	3.3	3.94
Bulgaria	35	9.0	3.89
Hungary	23	10.6	2.17
Sweden	11	8.4	1.31
Romania	24	23.0	1.04
Australia	14	16.5	0.85
South Korea	33	42.6	0.77
West Germany	40	61.2	0.65
Yugoslavia	12	23.6	0.51
USSR	132	286.0	0.46
Poland	16	38.0	0.42
Great Britain	24	57.1	0.42
United States	94	246.1	0.38
France	16	55.9	0.29
Italy	14	57.3	0.24
Japan	14	122.7	0.11
China	28	1087.0	0.03

The "General Medal Rate." In the general fertility rate (births per 1,000 women 15-44 years old), the numerator is the total number of births, but now the denominator is limited to those individuals (women of childbearing age) capable of performing what is included in the numerator. Similarly, not all people in a nation are capable of performing in the Olympic Games. So perhaps the most refined measure would be a "general Olympic medal rate," gauging how many medals were earned per 1,000 participants.

When countries' general Olympic rate is calculated, East Germany (again) comes out on top with a rate of 354 medals per 1,000 team members (see Table 2). The 288 East German participants received a total of 102 medals. Romania was a surprisingly close second with a rate of 320 per 1,000. The U.S. finished fifth with a general rate of 154.

The "Participation Rate." Of course, one variable in all this is the number of athletes a country sends in the first place, a variable which depends on many factors such as a nation's economic development, financial capacity, and commitment, or its geographical proximity to the Games site. In sum, the number of participants from any given country will vary independently of that country's size.

Developing an "Olympic Games participation rate" allows us to determine the commitment of a country to the Games as defined by the number of participants per million. Of the top 19 medal-winning nations, New Zealand had the highest participation rate (28.2 team members per million), followed by Sweden and Bulgaria. The U.S. ranked 16th, with 2.5, while the USSR and China brought up the rear. Obviously, population size is not related to participation in the Games.

Another interesting measure looks at the number of medals won relative to per capita GNP. The argument here is that the richer a nation, regardless of size, the easier time it will have organizing and training a team, as well

Table 3: Cost per Medal in Per Capita GNP

Country	Total medals	Per capita GNP (\$)	GNP dollars per medal
China	28	300	10.71
USSR	132	7,400	56.06
South Korea	33	2,370	71.82
Hungary	23	2,010	87.39
East Germany	102	9,800	96.08
Poland	16	2,070	129.38
Bulgaria	35	6,270	179.14
United States	94	17,500	186.17
Yugoslavia	12	2,300	191.67
Romania	24	5,140	214.17
West Germany	40	12,080	302.00
Great Britain	24	8,920	371.67
New Zealand	13	7,110	546.92
Italy	14	8,570	612.14
France	16	10,740	671.25
Australia	14	11,910	850.71
Japan	14	12,850	917.86
Sweden	11	13,170	1,197.27
Canada	10	14,100	1,410.00

as selecting and supporting the "best and brightest" among its athletic citizens. If we take a pragmatic view and argue that money helps win medals and that winning medals in turn fosters positive nationalistic pride by providing bragging rights, folk heroes, and international sports coverage, it seems fair to ask which country gets the biggest bang per dollar spent.

**Table 2: General Medal Rate
(per 1,000 participants)**

Country	Rate
East Germany	354
Romania	320
USSR	254
Bulgaria	181
United States	154
New Zealand	140
Hungary	105
Poland	105
West Germany	96
China	96
South Korea	71
Yugoslavia	71
Great Britain	65
Sweden	53
France	52
Japan	49
Australia	47
Italy	43
Canada	26

The "Cost per Medal Rate."

Measuring a country's "bang per buck" requires dividing its per capita GNP by the number of medals won. The clear value leader here is China, which despite its very low per capita GNP (\$300 as of 1986) was sixth overall in number of medals (See Table 3.) China "spent" \$10.71 per capita income for each medal won. The USSR gains second place. Its per capita GNP divided by its many medals comes out to only \$56.06 per medal. Host country South Korea, perhaps benefiting from home team advantage, finished third — \$71.82.

The U.S. in eighth place, spent \$186.17 per medal. Canada turns out to be the spendthrift of countries winning at least 10 medals; its 10 were won at a "cost" of \$1,410 per medal.

The Madison Avenue Nationalism Award goes to the nation that spent the most to hear its national anthem droned throughout the world — an honor accorded gold medalists. To qualify for this competition, a country must have earned at least five gold medals. France is the winner here — its per capita GNP divided by its gold medal tally results in a "cost" of \$2,148.

Continued on page 9

New State Estimates

The Census Bureau has released a preliminary set of state estimates which reflect some interesting shifts in the nation's growth patterns. The Industrial Midwest has recently undergone a period of mild demographic resurgence in the sense that it is no longer declining in population. And the Big Three of population growth, California, Florida, and Texas, are rapidly becoming the Big Two as Texas's growth dwindles.

The upturn in growth in Ohio, Michigan, and Indiana is hardly the result of any massive in-movement to those "Rust-belt" states; rather it reflects less outward movement than earlier in the decade. Overall, the Midwest grew by an annual average of 230,000 from 1985 to 1988, but its "natural increase" of births minus deaths was larger, about 390,000. The Midwest still loses population by migration, but fewer people are now leaving on a net basis.

Texas's drop, however, is rather stunning. In the early 1980s, the Lone Star State was increasing at a pace of half million per year. But, by 1988, the estimates suggest that growth may have come to a halt. Such a situation is almost certainly due to the depressed state of the energy industry. Similarly, West Virginia, a bellwether of the coal industry, is losing population at a relatively rapid pace.

Wyoming, which also has energy industry troubles, leads the loss column on a percentage basis, where there were 13 Wyomingites in 1985, in 1988 there were only about 12. Other states that lost significant numbers are North Dakota, Montana, and West Virginia.

Most of the "usual suspects" were in the gain column, headed by Nevada's 12.8 percent increase (beginning with a sub-1-million base).

The table at right details the state pattern of population shifts from 1985 to 1988. The Census Bureau will finalize these estimates in a report to be issued later this year. But when Michigan's population growth rate over three years almost equals Texas's—as was the case 1985-1988—it signals that U.S. population trends have experienced some sort of midcourse correction.

—C.H.

Estimates of the Resident Population of States: 1985 and 1988
(Numbers in thousands. Includes Armed Forces residing in each state)

Region and state	July 1, 1988	July 1, 1985	Change, 1985-88	
			number	percent
United States	245,807	238,736	7,071	3.0
Northeast	50,611	49,867	744	1.5
Midwest	59,894	59,201	693	1.2
South	84,878	81,877	3,001	3.7
West	50,424	47,791	2,633	5.5
Northeast				
Maine	1,206	1,164	42	3.6
New Hampshire	1,097	998	99	9.9
Vermont	556	535	21	3.9
Massachusetts	5,871	5,824	47	0.8
Rhode Island	995	967	28	2.9
Connecticut	3,241	3,176	66	2.1
New York	17,898	17,769	129	0.7
New Jersey	7,720	7,569	151	2.0
Pennsylvania	12,027	11,866	161	1.4
Midwest				
Ohio	10,872	10,748	124	1.2
Indiana	5,575	5,501	75	1.4
Illinois	11,544	11,540	4	—
Michigan	9,300	9,089	211	2.3
Wisconsin	4,858	4,776	82	1.7
Minnesota	4,306	4,191	115	2.7
Iowa	2,834	2,873	-39	-1.4
Missouri	5,139	5,037	102	2.0
North Dakota	663	685	-22	-3.2
South Dakota	715	708	7	0.9
Nebraska	1,601	1,605	-4	-0.3
Kansas	2,487	2,449	39	1.6
South				
Delaware	660	626	34	5.4
Maryland	4,644	4,392	252	5.7
District of Columbia	620	623	-3	-0.5
Virginia	5,996	5,705	291	5.1
West Virginia	1,884	1,936	-53	-2.7
North Carolina	6,526	6,258	268	4.3
South Carolina	3,493	3,334	160	4.8
Georgia	6,401	5,976	425	7.1
Florida	12,377	11,369	1,008	8.9
Kentucky	3,721	3,724	-4	-0.1
Tennessee	4,919	4,767	152	3.2
Alabama	4,127	4,022	105	2.6
Mississippi	2,627	2,614	13	0.5
Arkansas	2,422	2,360	62	2.6
Louisiana	4,420	4,484	-64	-1.4
Oklahoma	3,263	3,303	-40	-1.2
Texas	16,780	16,384	396	2.4
West				
Montana	804	825	-21	-2.6
Idaho	999	1,005	-6	-0.6
Wyoming	471	509	-39	-7.6
Colorado	3,290	3,232	57	1.8
New Mexico	1,510	1,450	59	4.1
Arizona	3,466	3,161	304	9.6
Utah	1,691	1,644	47	2.9
Nevada	1,060	939	120	12.8
Washington	4,619	4,407	212	4.8
Oregon	2,741	2,689	52	2.0
California	28,168	26,357	1,812	6.9
Alaska	513	522	-8	-1.6
Hawaii	1,093	1,050	43	4.0

Source: Census Bureau interim estimate

Demographers Page

Continued from page 7

Great Britain is second with \$1,784. The U.S. finished fifth, spending \$486.11, while the USSR produced golds with a \$134.55 per capita expenditure.

Kenya and China, by contrast, each earned five gold medals, which comes out to \$60.00 of per capita GNP per gold—a very good value.

Admittedly none of these measures is perfect. Many factors are not considered, for example, all medals do not go to individuals. The U.S. women's basketball team received one gold medal, the East German swimmer, Kristin Otto, received six. Also, all countries did not necessarily participate in all sports. Some may have selected specific areas of strength. There were 31 sports in all, including two demonstration sports (women's judo and Taekwondo) and one exhibition sport (bowling) for which no medals were awarded. In attempting to determine a winner, all these factors would have to be considered.

What nation won the Olympic Games? The USSR garnered the most medals but East Germany was the clear overall winner according to just about every other kind of measure. How did the U.S. fare? It had the third highest number of medals but was only 14th on the crude rate and fifth in terms of general rate. If a country's participation in the Games is as important as winning, then New Zealand should be considered too.

The true correct answer is, properly, none. Unfortunately this Olympic truth is often forgotten in the rush to see the Games as a surrogate for the conflict and competition between nations. No nation won the 1988 Olympic Games or any other Olympic Games. Individuals or teams, competing as friendly adversaries, won. That, not international one-upmanship, is what the Olympics are supposed to be all about.

Reference

1. Leon F. Bouvier, "A Demographer Looks at the 1984 Olympic Games," *Population Today*, October 1984, pp. 6-7.

SOFTWARE

The Social Development

Center (SDC), Chicago, has announced its program of training workshops and technical services for 1989. SDC, a nonprofit organization, offers a full range of microcomputer training services, oriented primarily toward the needs of developing nations in Latin America, Africa, and Asia, which include workshops and seminars in Chicago and outside the United States.

From May to October 1989, the Center will hold a series of seminars in Chicago on the use of microcomputers in sample surveys, census taking, and research in population, health, and planning. Each of these seminars runs

for four weeks. Offered in either Spanish, English, or French, they are intended for persons who carry out or process surveys, national censuses, or research and evaluation projects. The workshops are oriented toward use of microcomputers for intermediate and moderately advanced statistical and demographic analysis. They assume that participants are good but not expert statisticians who have some familiarity with personal computers.

For further information, contact: Office of Training, Social Development Center, 1313 E. 60th St., Suite 145, Chicago, Ill. 60637; phone (312) 947-2010.

POPULATION UPDATE

Estimated United States Population:

As of November 1, 1988	247,031,000
As of November 1, 1987	244,754,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P 25, No. 1029.

Estimated World Population:

As of February 1989	5,180,000,000
Annual growth	89,000,000

Estimated by extrapolation from the mid 1988 population on PRB's *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: October 1988

Item	12 months ending with October					
	Number		Rate			
	1988	1987	1988	1987	1986	1985
Live births	3,899,000	3,801,000	15.9	15.7	15.5	15.8
Deaths	2,170,000	2,121,000	8.9	8.7	8.7	8.8
Natural increase	1,729,000	1,680,000	7.0	7.0	6.8	7.0
Marriages	2,379,000	2,421,000	9.7	10.0	10.0	10.2
Divorces	1,167,000	1,159,000	4.8	4.8	4.8	5.0
Infant deaths	38,600	37,700	10.0	9.9	10.5	10.5
Population base (in millions)			245.2	242.9	240.6	237.9

Note: Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source: *Monthly Vital Statistics Report* (Vol. 37, No. 10) from the National Center for Health Statistics.

Population and Other Global Systems

Continued from page 4

"The effects of rapid population growth on natural resources and the environment are a critical concern, but the issue is complex," the study's authors write. "With an expanding economy, population growth can often be accommodated reasonably. On the other hand, in the absence of economic development, the needs of a rapidly growing population can contribute to the destruction or degradation of the very resource base upon which a country's development depends."

As the title implies, *World Resources 1988-1989*, previously an annual, is now published as a biennial. Each future edition will also focus on conditions and solutions to problems being tried in one region of the world, with Asia as the timely focus here.

This edition also marks a new linkage between the World Resources Institute and the International Institute for Environment and Development with the United Nations Environmental Programme, which will provide access to additional data sources, e.g., the Global Environment Monitoring System networks and increase cooperation with governmental and nongovernmental organizations worldwide.

To obtain a copy of *World Resources 1988-1989*, send \$16.95 plus \$2.00 shipping to WRI Publications, PO. Box 620, Holmes, Pa. 19043.

—D.D.

Choldin New PRB Visiting Scholar

Harvey M. Choldin has been named PRB's new Andrew W. Mellon Visiting Scholar for the 1989-1990 academic year.

Choldin is a professor of sociology at the University of Illinois—Urbana—Champaign and the author of numerous books and articles.

His work at PRB will focus on the role of the U.S. Office of Management and Budget (OMB), describing the federal statistical system and OMB's function within it.

TAKE A NUMBER

Utah Baby Bust?: Fertility in Utah has been making the news of late since the number of births in the state has been dropping. One article mistakenly claimed that this decrease in births was the first in the state's history. The total fertility rate (TFR) dropped from 3.2 lifetime births per woman in 1980 to 2.5 in 1987. But it's hardly the first fertility decline in the Beehive State. The TFR also decreased right after the 1970 Census only to return to the 1970 level in 1980. In fact, the TFR was also declining after 1960 (from a TFR of 4.2) but rose a bit in 1970. It makes one wonder if intercensal population estimates produce sufficiently reliable TFRs for states. Whether or not the current situation results from any declining influence of the Mormon Church, the depressed state of the energy-related economy, or the out-migration of those of childbearing age, we don't know. But it will be interesting to see if Utah's TFR once again takes a census-year rise.

Here and There as more birth rates for European countries are received, it is evident that

Italy really does have the world's lowest fertility at a TFR of 1.3 children per woman; previous record holder West Germany has risen to 1.4. News from China: China's TFR in 1987 was 2.49, up from 2.19 in 1984; minorities accounted for 8.0 percent of the population in 1987, partly a result of their exemption from the national family planning campaign and partly from re-registering some people formerly classified as Han to another group. As the New Year began, the U.S. population stood at 247 million, according to an early Census Bureau estimate based upon an estimated 3.9 million births, 2.2 million deaths, and net migration of 606,000 during 1988. In terms of population, the fastest growing Soviet SSR is the Asian republic of Tajik, which grew by 37 percent 1970-1985 and which is also the republic with the sparsest Communist Party membership (29 per 1,000 populations), according to the U.S. State Dept. and the Bureau of the Census. The population/party relationship correlates inversely across most of the USSR's republics.

—C.H.

ADDENDA

Little Pat on the Back



The above population clock is on temporary display at the Smithsonian Institution in Washington, D.C. It is based on PRB's figures, and if you scrutinize the label, you may just be able to see our source credit. That clock should be reading 5,192,752,281 right now.

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in *Current Readings*. Publishers may address review copies to Book Review Editor, *POPULATION TODAY*, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

PERSPECTIVES ON DEVELOPMENT AND POPULATION GROWTH IN THE THIRD WORLD

by Ozzie G. Simmons
New York, Plenum Press, 1988. 277 pages. \$32.50 cloth. ISBN 0-306-42941-1

This book is a readable, broad-brush review of various theories of Third World development and the ways in which population growth is affected by or affects development.

After a brief introductory chapter, the first two chapters review the evolution of development theory from the concept of "modernization" characterized by W. W. Rostow's *The Stages of Economic Growth: A Non-Communist Manifesto* to what the author perceives as the current stress on equity-oriented development. The author clearly feels that ideas on development have become better, both more realistic and more humane.

"Stages of growth" as a theory suffers from two basic flaws: 1) it is highly ethnocentric by assuming that the developing world would proceed along the same course as the developed one and 2) it fails to have any predictive, or planning, value because no threshold levels are specified. Current thinking stresses helping people where they live, i.e. an emphasis on agriculture and human resources.

These two chapters frame development theory nicely for non-economists, particularly its jargon, fads and improvements. The author does convey the impression that current thinking will last longer than the models it has replaced. However, given the amount we still do not know about the develop-

ment process, one might wonder whether a similar volume written 10 years from now might include "equity-oriented development" on the fad list.

The following two chapters offer a similar review of theories of population growth and its relationship to the development process. Again, the approach is broad-brush and more informative for non-demographers. The author reviews "demographic transition theory," and the work of J.C. Caldwell, K. Davis, J. Blake and J. Bongaarts, among others, as evolutionary stages of thought. He usefully points out parallels between development and population theory. For example, "demographic transition theory" is very similar to "stages of growth" and both theories suffer from the same flaws (noted above).

Sadly, this book is a posthumous testament to the author's many years of experience in the field and to his ultimate optimism that the world has made progress in understanding population and development. While neither economists nor demographers may find the book a sufficient relation of their side of the story, each side can learn something about the other. The book would also be useful to students and others who want an introduction to both sides.

— Nancy Yinger

TOWARDS SUSTAINABLE DEVELOPMENT

by 14 African and Asian journalists, and Ingvar Carlsson, Gro Harlem Brundtland, and Shridath S. Ramphal. London: PANOS Publications Ltd. Unpaginated. ISBN 1-870670-01-9

This book is the result of an interesting experiment. Fourteen independent African and Asian journalists were commissioned to prepare individual reports on Nordic foreign aid projects in their region. The donors selected the 14

projects, the London-based PANOS Institute picked the writers, and the Swedish International Development Authority funded the project.

The ostensible question at issue is the sustainability of the projects, but one common theme runs through the book: the grassroots reaction to the implementation of a foreign development project.

For the most part, the journalists are pragmatic about the average Third World resident living through the throes of great change — he or she is often described as unmotivated, poorly educated, and short-sighted. And many local bureaucrats are pictured as desk-bound, haughty, and incompetent. But while the book is clearly no whitewash of Third World societies, it freely criticizes the outside plans of the well-intentioned Nordic benefactors.

The unforeseen ramifications of the Mtera Dam in Central Tanzania is a case in point. The \$150 million project, funded in part by the Swedish International Development Authority, is by all accounts a success. Yet, the project left a trail of human problems: people who had to be moved from the dam basin felt improperly resettled, and the newly created lake site triggered an unanticipated immigration, which in turn caused soil erosion, deforestation, health problems, and tribal conflicts. Ironically, the Mtera Dam residents — much to their consternation — didn't share in the resulting electric power, which was earmarked for larger markets.

Towards Sustainable Development doesn't really tell us anything new. It does, however, remind the reader that Third World individuals can be whiplashed by foreign assistance, even if the benefactors are benign and the projects ultimately completed.

— Winthrop Carty

SPOTLIGHT

BENIN

Population (mid-1988 est.): 4.5 million
 Land area: 43,483 sq. miles
 Population density: 103 persons per sq. mile
 Births per 1,000 pop. (1987 est.): 51
 Deaths per 1,000 pop. (1987 est.): 19
 Rate of natural increase (1987 est.): 3.2 percent
 Total fertility rate (1985-86 est.): 7.1 children per woman
 Infant mortality rate (1987 est.): 110 infant deaths per 1,000 live births
 Life expectancy at birth (1987 est.): 47 years
 GNP per capita: US \$270
 Capital: Porto-Novo (political), Cotonou (economic)

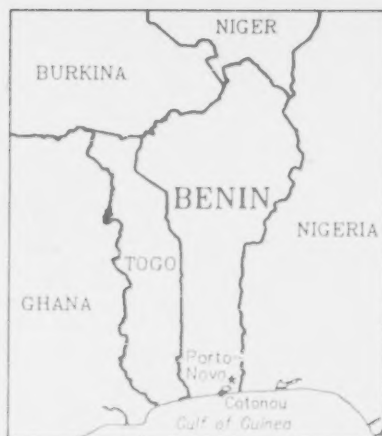
by John F. May

Slightly smaller than Pennsylvania, the People's Republic of Benin is situated in the Gulf of Guinea on the West Coast of Africa (see map). It achieved independence from French rule in 1960, and until 1975 it was known as Dahomey.

Benin is a poor country, even by sub-Saharan standards, with a mostly agricultural economy that is currently plagued by adverse climatic conditions (notably flooding). Its fragile resource base was further weakened during the 1970s by the decision, taken in the context of a Marxist-Leninist policy change, to nationalize large sectors of the economy.

The negative effects of this transformation were compounded by the international depression of the early 1980s and have consequently led to a high public-sector deficit. Now, however, the Government of Benin wants to adopt a privatization policy together with a comprehensive structural adjustment program assisted by the International Monetary Fund (IMF) and the World Bank.

Against the backdrop of the present bleak economic picture, Benin's demographic structure and trends are com-



parable to the situation of many sub-Saharan countries. Two major sources provide basic demographic information: the latest Benin census, organized in 1979 (whose fertility data are weak), and the nationwide fertility survey, undertaken in 1982 under the auspices of the World Fertility Survey (WFS).

Since World War II, figures show a fairly rapid decline in mortality—although mortality rates, especially the infant mortality rate, remain high. The lack of any fertility decline has resulted in a youthful age structure and, in conjunction with mortality decline, a rise in the rate of natural increase, from 2.7 in 1978 to 3.2 in 1987. At current rates, the Beninese population would double in the next 22 years.

Fertility has even increased slightly with the improvement in health conditions and the loosening of traditional inhibiting factors such as breastfeeding and postpartum taboos, as has occurred elsewhere in sub-Saharan Africa. The current rate of contraceptive prevalence (all methods) is estimated at 6 percent of women at risk. This is a fairly high contraceptive rate for an African francophone country,

but obviously can only have a limited restraining effect on fertility.

Until very recently, the Government of Benin considered the country's levels of fertility and natural increase to be satisfactory; its major population concerns were the high levels of morbidity and mortality. However, the acceleration of the population growth has led to increased demand for social services. This situation is further exacerbated by the large proportion of the urbanized population (more than one third of Benin's population lives in urban areas), in addition to higher expectations of the population for education and for jobs in the modern sector.

Given present economic conditions, the government is unable to satisfy the growing demand for social service provision and has become aware of the negative effects of rapid population growth on socioeconomic development. Discussions of population issues are now part of the governmental planning process. Nevertheless, this change in thinking has not yet gone farther than an attempt to integrate demographic variables into economic and social development planning.

In order to increase effectiveness, the Government of Benin is now planning a comprehensive national population policy as well as practical plans to implement it. New demographic data and analyses, including information regarding family building patterns, will be necessary during the course of this process. If successful, a national population policy could serve as a catalyst to redesign Benin's future development strategies.

John F. May, Demographer, is Coordinator of Francophone Programs at The Futures Group, Washington, D.C.

POPULATION TODAY

Vol. 17, No. 3 March 1989

FEATURES

3 The U.S. population could start to shrink in 2040

On the other hand, maybe it won't: the Census Bureau makes projections for any and all contingencies

4 Study to survey American sexual behavior

Four decades after the Kinsey report, sex in the U.S. still largely terra incognita

4 Population issues face the 101st Congress

New committee chairmen, new funding levels highlight Washington in 1989

5 Population assistance comes from many countries

From Australia to West Germany, everyone pitches in

5 Women at risk in the Dominican Republic knowledgeable about contraception

Sterilization the most popular method, rhythm the least

6 Suppose the 1990 Census were adjusted—what would happen to congressional reapportionment?

Not a whole lot, demographic study shows

10 New prices on PRB publications for 1989

12 Since the revolution, China has been on a demographic rollercoaster

Latest fertility rate is 2.5 children per woman, but regional rates vary widely

DEPARTMENTS

2 From the editor's desk

2 Speaking graphically

5 Survey report (Dominican Republic)

6 Demographer's page

8 Positions/professionals

9 Softwhere

9 Population update

10 Take a number

11 Current readings

12 Spotlight (China)



One of China's 1,087,000,000 citizens.
(See page 12.)



PRB

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FROM THE EDITOR'S DESK

The Census Bureau's recently released study which shows a declining U.S. population in about 50 years surely came as no surprise to demographers, who can foresee the ramifications of below-replacement fertility and an aging population.

But the study marks the first time that the Bureau projected population decline as the most realistic outcome of current trends in the U.S. And it created quite a flurry of commentary in the media.

Experts are divided on the impact of a declining U.S. population. Some write with furrowed brows about labor shortages and reduced competitiveness in international markets. Others counter that numbers are not synonymous with strength, militarily or economically. And caring for an aging population weighs heavily

Twenty years ago, when Zero Population Growth was founded, who would have thought that the idea that the U.S. could achieve—even surpass—ZPG would be met with worried musing and apprehensive speculation?

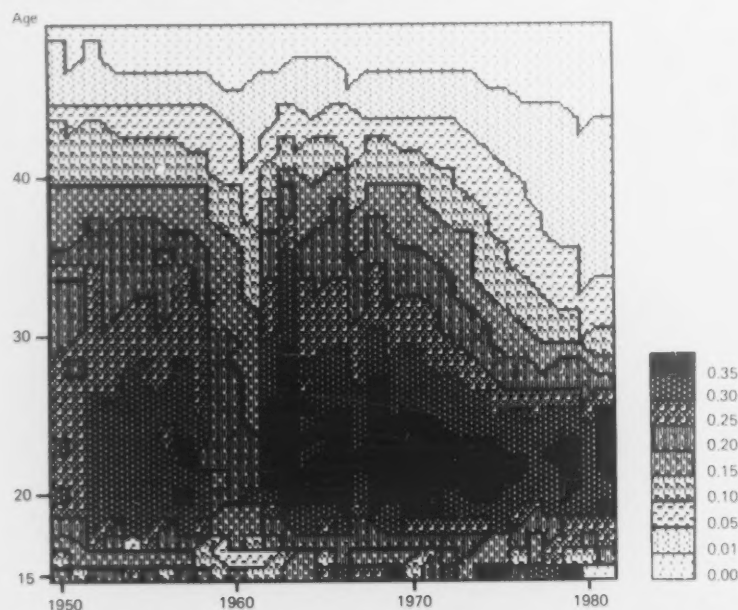
The rapacious consumers of natural resources who inhabit the United States contribute in no small part to the environmental crisis we are all becoming more aware of today. Surely having fewer U.S. consumers in 50 years is at least one prospect to be hailed, not scorned.

As much speculation as these projections have generated, one thing is for certain: come what may in 2040, it's very likely that the scenario will be one that the experts haven't yet envisioned.

—Janine Adams

SPEAKING GRAPHICALLY

A Fertility Contour Map of China



The "Lexis map" above graphically depicts the trends of age specific fertility in China among ever-married women from 1950 to 1981. It shows at a glance the proportion of women having children in each year, a figure that varies from zero to more than 0.35, depending on age.

Reproduced with the permission of the Population Council, from Zeng Yi, James W. Vaupel, and Anatoli I. Yashin, "Marriage and fertility in China: A graphical analysis," *Population and Development Review* 11, No. 4 (December 1985) (p. 728), Figure 4.

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*Educators and students should send supporting documentation.

U.S. to Face Population Decline?

The U.S. population could top out at 309 million around 2040 and then start to decline, according to new Census Bureau projections released in January.

U.S. population as of January 1, 1989 was 247,443,000 people, according to the Bureau.

The projection marks the first time in many decades the Bureau's middle projection has raised the possibility (some social commentators would say specter) of future population decline. The Bureau produces a wide spectrum of alternative projections according to a mix of assumptions, so in the past its low series has sometimes projected population decline.

Demographers are always painstakingly careful to say that their numbers are "projections, not predictions." A projection is a model of the future based on assumed future demographic trends. Demographers are also fond of saying, "A projection is never wrong." That is, the math behind the projection is always right, though the relevance of the projection numbers to actual real life (many years or decades hence) may be an entirely separate matter.

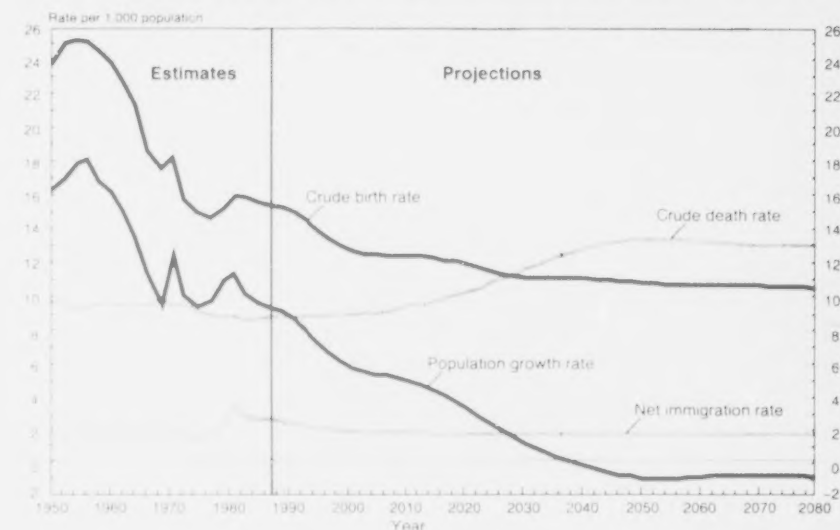
Assumptions are the driving force behind any projection. Often they may actually be of more interest than the final numbers they determine. The new Bureau projections consist of fully 30 projection series combining different assumptions about future U.S. population change. To give an idea of the range of the series:

Series	Total pop. proj. in 2080 (in thousands)
Lowest	184,614
Middle	292,235
Highest	501,483

Why the variation? The three projections are the product of assumptions about future trends in the three components of population change: fertility, mortality, and net immigration.

As the names imply, "lowest" results from the lowest assumptions about all three of these components; "middle"

Components of Population Change in the Middle Series: 1950 to 2080



Source: U.S. Bureau of the Census, Current Population Reports, Series P-25, Nos. 802 and 1006, table 1 B

the middle, and "high" the highest values within the realm of possibility. The middle range of possible alternatives is usually considered the most likely. The remaining 27 projection series assume differing combinations of these components—Series 8, for example, assumes future low mortality, high immigration, and middling fertility; Series 9 assumes these components to be low, high, and high. And so forth.

To give an idea of the assumptions for each component:

Fertility. Completed family size for the low series is assumed to be an average of 1.5 children per woman in the population; the medium series, 1.8 children; and the high series, 2.2 children per woman. The medium series represents a drop from the previous medium series of projections, which posited 1.9 children.

Mortality. U.S. life expectancy, which has a long history of gradual increase, is 75.0 years as of 1986 and is expected to continue improving at least incrementally in the future. In the Bureau's middle series, life expectancy is projected to rise about 6 years by 2080, to 81.2. Under low-mortality conditions, the projections assume a rise of about 12 years; the high-mortality projections, a rise of only about three years.

Immigration. The middle assumption postulates that annual net immigration, an estimated 606,000 in 1988, will ultimately decline to 500,000 annually. The low immigration alternative is pegged at 300,000, while the high level is considered to be 800,000.

To show how immigration affects U.S. total population, using middle-series fertility, mortality, and immigration assumptions, the U.S. population is projected to reach 292.2 million in 2080. If, however, net immigration were reduced to zero, that figure would be 220.3 million, about one-quarter lower.

Immigration is the most difficult growth component to project. While population size and structure provide rich data for estimating future fertility and mortality, unforeseeable future changes in federal law or in the flow of undocumented immigration "are not particularly amenable to quantitative analysis," the Bureau report notes dryly.

—A.H.

Projections of the Population of the United States, by Age, Sex, and Race: 1988 to 2080 by Gregory Spencer, (Current Population Reports, P-25, No. 1018) is replete with graphs, methodology notes, and detailed tables showing the population consequences of 30 projection series. It is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Surveying Sex In the U.S.

Four decades after Alfred Kinsey's famous study, sexual behavior in the U.S. remains a great unknown, with meager quantitative data lost amid vast quantities of tabloid anecdotes.

A pilot study interviewing 2,300 people on their sexual behavior is starting this month, undertaken by the National Opinion Research Center (NORC), University of Chicago for the National Institute on Child Health and Human Development (NICHD).

About 20,000 people would be interviewed over two years for a representative sampling in a national survey, if all goes well with the pilot project and the government agrees to continue the investigation. One tactic NORC will try is using a card which lists sexual activities in several language phrasings accompanied by numbers (1 for kissing, 2) on the theory that people may be more at ease with numbers than with words.

The national survey was recommended by the National Academy of Sciences and the Institute of Medicine some years ago, primarily to help determine who is at risk for AIDS. Figures on possible HIV infections are — still — based upon Kinsey's studies in the 1930 and 1940s of midwestern college members.

The survey will concentrate on sexual and social behavior, particularly circumstances and practices such as drug abuse placing people at risk for AIDS and/or sexually-transmitted diseases.

The study will overlap in minor ways with other investigations, such as questions about contraception and age at first sexual intercourse also asked by the National Survey of Family Growth undertaken by the National Center for Health Statistics. Their Cycle IV field data are currently being processed. (PRB published an analysis of the 1982-83 survey in its *Population Bulletin* "Understanding U.S. Fertility: Findings from the National Survey of Family Growth, Cycle III," (Vol. 39, No. 5), by William F. Pratt, William D. Mosher, Christine A. Bachrach, and Marjorie Horn.

— R.Y.

WASHINGTON WATCH



The 101st Congress has convened and is slowly beginning to get the legislative process underway. President Reagan submitted a budget for Fiscal Year 1990 before he left office, which provided the initial framework for spending decisions. President Bush has now put his imprint on the FY 1990 budget but specifics are still sketchy. Congress is working on a budget resolution to be adopted on or before April 15th.

New Faces on Congressional Committees

Ten new Senators (five Democrats and five Republicans) were elected to the 101st Congress, with a sixth Republican appointed to fill the remaining term of now-Vice President Quayle. While this is a small change in the overall Senate membership, it has made a significant difference to committee memberships as many of the retiring Senators were senior and had assignments on major committees.

For example, the Senate Appropriations Subcommittee on Labor, Health and Human Services, Education, and Related Agencies has a new Chairman, Senator Tom Harkin (D-Iowa) and a new ranking Minority Member, Senator Arlen Specter (R-Pa.). Four new members have been added to the Committee: Harvey Reid (D-Nev.), Brock Adams (D-Wash.), Thad Cochran (R-Miss.), and Phil Gramm (R-Tex.). This means that more than one-fourth of the Committee is new.

On the House side, 34 new Members (18 Democrats and 16 Republicans) were elected to the House of Representatives. However, the comparable House Appropriations Subcommittee on Labor, Health, and Human Services continues with the same membership.

These changes are significant because these Committees have responsibility for deciding appropriations for the National Institutes of Health (NIH) and, in particular, the National Institute of Child Health and Human Development (NICHD) and the

National Institute of Aging; major sources of funding for demographic research.

Major changes have also occurred in the House Subcommittee on Census and Population, charged with oversight of the 1990 Census. It has a new Chairman, Thomas C. Sawyer (D-Ohio), although Constance Morella (R-Md.) will remain ranking Republican. Former Chairman Mervyn Dymally (D-Calif.) will stay on the Subcommittee but has also been made Chair of the Foreign Operations Subcommittee of the House Foreign Affairs Committee. This Subcommittee has legislative responsibility for international population assistance programs so Congressman Dymally is now in a strategic position regarding foreign aid.

In the Senate a new Subcommittee on the 1990 Census has been created under the Committee on Governmental Affairs, with Senator Jeff Bingaman (D-NM) as Chair.

FY 1990 Budget

President Reagan sent Congress his proposed FY 1990 budget in January. President Bush used this budget as a framework for making his proposals for a "kinder, gentler" nation. The major change that Bush has proposed is slowing growth in the Defense Department's budget. Since President Bush has not outlined specific changes or all figures, the Reagan budget is still being used as the framework for appropriation decisions.

Specific recommendations in the Reagan budget include \$444 million for (NICHD) (including \$27 million for AIDS research). Of this approximately 16 percent — or \$71 million — will be spent on demographic and behavioral science research. While this is a \$14 million increase for the NICHD over the FY 1989 budget, it will not cover existing program costs. Only 19.7 percent of the competing research grants will be funded, compared to an NIH average of 24.4 percent. Negotiated

Continued on page 9

Aid to World Population Programs

Although the United States is the largest donor of international population assistance (foreign aid appropriations for FY 1989 provide \$197.9 million), several nations provide population assistance to other countries as well as to international groups and the UN specialized agencies.

The Population Crisis Committee of Washington, D.C. reports the following approximate amounts as the most recent information available:

Australia: \$2.5 million in 1986-1987, Australian International Development Assistance Bureau.

Canada: \$57.5 million for 1988-1989, Canadian International Development Agency.

Denmark: \$15.5 million for multilateral assistance in 1987, Danish International Development Agency.

Finland: \$1.2 million for multilateral assistance in 1988, Department for International Development Cooperation, Ministry of Foreign Affairs.

Italy: \$3.7 million in 1985, Directorate General for Development Cooperation, Ministry of Foreign Affairs.

Japan: \$60 million in 1988, Economic Cooperation Bureau of the Ministry of Foreign Affairs.

Netherlands: \$20.6 million in 1987, Directorate General for International Cooperation, Ministry of Foreign Affairs.

Norway: \$38.9 million in 1987, Norwegian Agency for International Development, Royal Norwegian Ministry of Foreign Affairs.

Sweden: \$33.5 million for 1987-88, Swedish International Development Authority.

Switzerland: \$4.7 million for multilateral assistance in 1988, Directorate for Development and Humanitarian Aid, Ministry of Foreign Affairs.

United Kingdom: \$23.8 million in 1987, Overseas Development Administration.

West Germany: \$32.2 million in 1986, Federal Ministry for Economic Cooperation.

—R.Y.

Source: Population Crisis Committee, Population Briefing Paper No. 21, December 1988, p. 20.

SURVEY REPORT

Dominican Republic

Dominican women opt for effective means of contraception, but still prefer relatively large families, according to the results of the 1986 Demographic and Health Survey (DHS) in the Dominican Republic. The 1986 DHS, for which 7,649 women 15 to 49 years of age were interviewed, was the third national-level fertility and family planning survey conducted in that Caribbean country since 1980.

Although only one-half of the married women surveyed were currently using a contraceptive, over 93 percent of these women were using an effective method. Female sterilization is the most preferred method, employed by one-third of all married Dominican women of reproductive age. The pill is the second most popular method, used by 8.8 percent of the married women surveyed, followed by the IUD, with a 3 percent use rate. Only 2 percent of the women used another modern method, and 3 percent relied on rhythm, withdrawal, or some other less effective method.

Earlier family planning surveys showed similar preferences concerning methods, but slightly lower prevalence rates. In 1975, 33 percent of the married women were using family planning, and 47 percent were contracepting in 1983.

The majority of women not contracepting wanted to get pregnant, and relatively few showed a desire to wait several years between births. About 29 percent of the women said that they did not want any more children within the next two years yet were not using any form of effective contraception. Women most often cited "health" reasons for not using a family planning method, perhaps reflecting a fear of side effects from some methods.

Fertility has also been falling in the Dominican Republic in recent decades. The total fertility rate, or number of lifetime births per woman, exceeded 6 children per woman in the 1970s, yet fell to about 4.1 in 1983. The 1986 DHS recorded a total fertility rate (TFR) of 3.7 lifetime births per woman for the 1983-1985 period, the first time this rate had declined below 4.

However, Dominican women are having more children than they would prefer, according to the report. The "wanted" TFR, or the number of lifetime births women would like to have, was calculated to be only 2.8 births based on the responses of recent mothers to questions about whether they had planned their last birth. The difference of one child between the actual TFR and the "wanted" TFR suggest that Dominican women might make greater use of family planning services.

The survey also documented a need for greater access to maternal and child health services. Although infant mortality has fallen since the 1970s, the Dominican Republic still has one of the highest infant mortality rates (IMR) in the region. About 68 infants per 1,000 die before their first birthday, according to the 1986 DHS. Expansion of health services into the rural areas has helped child and maternal health, and accounts for most of the improvement in the national IMR. In 1986, about three-quarters of the children under age 5 had been vaccinated against one or more childhood diseases, however, few have been protected against all six of the most devastating childhood diseases (polio, diphtheria, tetanus, whooping cough, TB, and measles).

—M.K.

DEMOGRAPHER'S PAGE

Effects of Census Adjustment

by William P. O'Hare

With the 1990 Decennial Census a little over a year away, many political observers are beginning to think about the impact the next census will have on the apportionment of Congress. With large population shifts from the Northeast and Midwest to the Sunbelt states, many seats in Congress will change.

These major shifts will unquestionably change the makeup of Congress. But another, separate issue is whether the decennial census count should be *adjusted*, with the theoretical goal of making it more accurate. Such an adjustment has never been done, but several powerful interest groups are now lobbying for it.

Not only whether to adjust, but *how* to adjust are important questions. The potential impact of various adjustment scenarios on the apportionment of Congressional seats following the 1990 Decennial Census follows.

Proposed Adjustments

The change most widely discussed is the possible adjustment of the census count to correct for the undercount of minorities. A long series of studies by the Census Bureau show that over the last several censuses, minorities have been missed at a much higher rate than whites. About 5.9 percent of blacks were missed in the 1980 Census, compared to about 1 percent of whites and other races.¹ While the data are less reliable, it is generally believed that Hispanics are missed at about the same rate as blacks.² Following the 1980 Census, many large cities sued the Census Bureau hoping that the courts would compel the Bureau to adjust its figures to reflect the uncounted minorities. After protracted litigation, the Census Bureau position

prevailed and counts were not adjusted.

The issue of undercount adjustment in the 1990 Census is already being raised by powerful interest groups. For example, a House Bill (HR 3511) which would require the Census Bureau to adjust census figures based on the undercount of minorities was seriously entertained by the House Post Office and Civil Service Committee before going down to defeat, in large part because of the amendments that were added to it. A suit has already been filed in federal court asking that the Bureau be required to make statistical adjustments. No trial date has been set for this case.

The second adjustment issue that has received popular attention involves undocumented aliens. Just prior to the 1980 Census, the Federation for American Immigration Reform (FAIR) sued the Census Bureau in an attempt to have the courts make the Bureau eliminate any illegal aliens from the num-

bers used in Congressional apportionment. That suit was thrown out on technical grounds.

There is a long history of legislative efforts³ to have illegal aliens removed from the census counts that goes back as least as far as 1929. During the last Congress, five separate bills were introduced which would exclude illegal aliens from the population count used to apportion the House of Representatives.⁴ A suit was filed in February 1988 which would accomplish the same thing if successful.

The third type of adjustment that resulted in litigation following the 1980 census involves imputation—a technical procedure employed by the Census Bureau. In a few cases, Census Bureau enumerators are unable to make contact with people in a housing unit, even though neighbors have indicated that the housing unit is definitely inhabited. If enumerators are unable to make contact after several callbacks, the Census Bureau notes that the housing

Table 1. Eight Scenarios for Adjustments to the 1990 Census

Scenario 1.	No adjustment to Census figures
Scenario 2.	The minority population (blacks plus Hispanics) in each state is increased by 5 percent
Scenario 3.	The number of undocumented aliens is subtracted from each state's figure
Scenario 4.	The number of imputed persons is subtracted from each state's figure
Scenario 5.	Two adjustments are made simultaneously: 1) The minority population in each state is increased by 5 percent, and 2) The number of undocumented aliens is subtracted from each state's figure
Scenario 6.	Two adjustments are made simultaneously: 1) The minority population in each state is increased by 5 percent, and 2) The number of imputed persons is subtracted from each state's figure
Scenario 7.	Two adjustments are made simultaneously: 1) The number of undocumented aliens is subtracted from each state's figure, and 2) The number of imputed persons are subtracted from each state's figure
Scenario 8.	All three adjustments are made simultaneously

unit is inhabited but the number of inhabitants is unknown. The Bureau then uses a computerized procedure for assigning, or "imputing," a number of inhabitants for the housing unit based on information about surrounding housing units.

This issue is less well known than the issues of minority undercount adjustment or the exclusion of illegal aliens, but the exclusion of imputed persons from a state's population count could affect the apportionment of Congressional seats.

The imputation procedure accounted for approximately 761,000 persons out of a final count of 226.5 million in the 1980 Census (0.34 percent of the total). Not surprisingly, some states have more of these "imputed" persons than others. Following the 1980 Census, the State of Indiana sued the Census Bureau in an effort to have the people that were imputed by the Census Bureau removed from the count of each state's population that is used for reapportionment. The Census Bureau prevailed in court.

The Result

While adjustment has become an issue in which significant political power is presumed to be at stake, what would actually happen to Congressional apportionment if the 1990 Census were adjusted? Analysis of the impact of possible adjustments to census data requires a projection of state populations to 1990 and some underlying assumptions about the undercount in the 1990 Census. The three major assumptions used in this Demographer's Page are outlined below:

1. Blacks and Hispanics will be undercounted by 5 percent in every state.
2. The number of illegal aliens counted in each state in the 1990 Census will be the same as those estimated in the 1980 Census.
3. The number of people "imputed" in each state's total population in 1990 will be the same as in 1980.

Table 2. The Impact of Various Adjustment Scenarios on Reapportionment Following 1990 Census

State	Projected Congressional	Scenarios							
	seats based on	Difference from column 1 based on results of scenario							
	no adjustment	1	2	3	4	5	6	7	8
Ala	7	0	0	0	0	0	0	0	0
Alaska	1	0	0	0	0	0	0	0	0
Ariz	7	0	0	0	0	0	0	0	0
Ark	4	0	0	0	0	0	0	0	0
Calif	50	0	-1	0	0	+1	-1	-1	
Colo	6	0	0	0	0	0	0	0	0
Conn	6	0	0	0	0	0	0	0	0
Del	1	0	0	0	0	0	0	0	0
Fla	22	0	0	0	0	0	0	0	0
Ga	12	0	0	0	0	0	0	0	0
Hawaii	2	0	0	0	0	0	0	0	0
Idaho	2	0	0	0	0	0	0	0	0
Ill	20	0	0	0	0	0	0	0	0
Ind	10	0	0	0	0	0	0	0	0
Iowa	5	0	0	0	0	0	0	0	0
Kan	4	0	0	0	0	0	0	0	0
Ky	7	0	0	-1	0	-1	0	0	0
La	8	0	0	0	0	0	0	0	0
Maine	2	0	0	0	0	0	0	0	0
Md	8	0	0	0	0	0	0	0	0
Mass	10	0	0	0	0	0	0	0	0
Mich	16	0	0	0	0	0	0	0	0
Minn	8	0	0	0	1	-1	0	0	0
Miss	5	0	0	0	0	0	0	0	0
Mo	9	0	0	0	0	0	0	0	0
Mont	1	0	0	0	0	0	0	0	0
Neb	3	0	0	0	0	0	0	0	0
Nev	2	0	0	0	0	0	0	0	0
N.H.	2	0	0	0	0	0	0	0	0
N.J.	14	0	0	0	0	0	0	0	0
N.M.	1	0	0	0	0	0	0	0	0
N.Y.	31	0	0	0	0	0	0	0	0
N.C.	12	0	0	0	0	0	0	0	0
N.Dak	1	0	0	0	0	0	0	0	0
Ohio	19	0	0	0	0	0	0	0	0
Okla	6	0	0	0	0	0	0	0	0
Oreg	5	0	0	0	0	0	0	0	0
Pa	20	0	+1	+1	+1	+1	+1	+1	
R.I.	2	0	0	0	0	0	0	0	0
S.C.	6	0	0	0	0	0	0	0	0
S.D.	1	0	0	0	0	0	0	0	0
Tenn	9	0	0	0	0	0	0	0	0
Tex	31	0	0	0	0	0	0	0	0
Utah	3	0	0	0	0	0	0	0	0
Vt	1	0	0	0	0	0	0	0	0
Va	11	0	0	0	0	0	0	0	0
Wash	8	0	0	0	0	0	0	0	0
W.Va	3	0	0	0	0	0	0	0	0
Wis	8	0	0	0	0	0	0	0	0
Wyom	1	0	0	0	0	0	0	0	0

Source: PRB projections.

Eight different scenarios for adjusting the census are listed in Table 1. The results of these scenarios for reapportionment of Congress following the 1990 Census are presented in Table 2.

It is clear that for most states, none of the adjustments described here will make any difference. For 46 out of the 50 states, none of the adjustments

Continued on next page

Demographer's Page

Continued from previous page

alone or in combination would cause the state to gain or lose a seat. The four states that might be affected by an adjustment of the types discussed here are California, Kentucky, Minnesota, and Pennsylvania.

Interestingly, Scenario 2, minority undercount adjustment, the modification of the census figures which has received the most attention, would not result in movement of any seats between states. Some past studies which indicate a big impact from this type of adjustment failed to adjust both the black and Hispanic populations, or made an adjustment in one state or locality but not others.

However, each of the other seven adjustment scenarios would result in a different apportionment of Congress.

The elimination of undocumented aliens from the numbers used for apportionment, Scenario 3, would move a seat from California to Pennsylvania. This is not surprising when you realize that the 1980 Census figures for California included an estimated 1 million illegal aliens. When these million people are taken out of California's projected population, that state loses a seat. Since Pennsylvania is projected to have gained almost enough population for an additional seat anyway, it is not surprising that the seat lost by California goes to Pennsylvania.

Scenario 4 (subtracting imputed persons from the census counts for each state) would result in one seat moving from Kentucky to Pennsylvania.

Scenarios 5 through 8 involve various combinations of adjustments. Scenario 5, which includes minority undercount adjustment and subtraction of undocumented aliens, would result in a seat moving from Minnesota to Pennsylvania.

Scenario 6, minority undercount adjustment and subtraction of imputed persons, would result in the movement of two seats. Under this scenario, Kentucky and Minnesota would each lose a seat, and California and Pennsylvania would gain one seat each.

Scenario 7, which includes subtracting undocumented aliens and imputed persons from each state's figure, would

result in one seat moving from California to Pennsylvania.

Finally, if all three adjustments were made simultaneously (Scenario 8), one seat would move from California to Pennsylvania.

Conclusions

It appears that none of the adjustments to census figures that are being urged upon the Bureau by various interest groups are likely to make a big difference in the overall apportionment of Congress following the 1990 Census. Nonetheless, for those few states that may be in jeopardy of losing a seat, and for those states that see the prospect of gaining an additional seat, the adjustment question is significant.

Under most adjustment scenarios, Pennsylvania is likely to gain an additional seat. Minnesota and Kentucky are not likely to gain an additional seat under any of the adjustment scenarios, but they may lose a seat depending on which adjustments are selected. California is unique in that it may gain a seat under some adjustment scenarios,

or lose a seat under different adjustment scenarios.

It is important to note that even though adjustment of census figures is not likely to have a major impact on Congressional reapportionment in 1990, adjustment of census figures would have a significant impact on the distribution of federal and state funding based on population figures. Furthermore, adjustment would have an impact on the redrawing of election district boundaries for federal, state, and local offices that follows the census. Consequently, it should be clear that adjustment issues are important for many reasons.

References

1. U.S. Bureau of the Census, "The Coverage of the Population in the 1980 Census," PHC80-E4 (Washington, DC: GPO, February 1988, Table A-80.4).
2. *Ibid.*, Table 7.1.
3. Black, Hugo L., Remarks in the Senate in *Congressional Record*, Vol. 71, May 1929, p. 2078.
4. Williams, Jennifer and David C. Huckabee, *Proposed Exclusion of Illegal Aliens from the Population Used to Apportion the House of Representatives: A Methodological and Policy Analysis*—Congressional Research Service Report 88-418 Gov., June 8, 1988.

POSITIONS/PROFESSIONALS

AID Economist. The Office of Population of the U.S. Agency for International Development has an immediate opening in its Policy Development Division for a part-time economist (i.e., up to 39 hours per week). The position will be filled at the GS-13 level (starting salary range of \$41,121 to \$53,460) and is based in the Washington, D.C. area. **Duties:** Serves as an economic advisor to the Office on the economic implications of population dynamics and programs. Conceptualizes and executes a systematic research effort on population and economic development and the role of population and family planning programs in meeting future contraceptive needs. Analyzes the demand for family planning on global, regional, and country levels. Ana-

lyzes the efficacy of alternative public sector resource allocations in the population sector. Provides technical direction and management to AID-sponsored projects which are concerned with population and development issues. Represents the Agency at academic, intergovernmental and professional conferences. **Qualifications:** Masters or Ph.D. in economics and at least three years of professional experience. Must be a U.S. citizen. Foreign language capability highly desirable, but not required. Applicants should submit vitae and completed SF-171 as soon as possible to: Agency for International Development, Office of Personnel Management, 2401 E Street, NW, Room 1127 SA-1, Washington, D.C. 20523, Attention: Merit Promotion Staff.

Washington Watch

Continued from page 4

reductions for research centers are projected to be 17.5 percent.

The proposed budget for the National Institute on Aging is \$221.2 million, an increase of \$8 million over FY 1989. The NIA spends about 20 percent of its extramural funds on social and behavioral research.

1990 Census

Other recommendations in the FY 1990 budget include \$116 million for the Census Bureau. The \$20 million increase is primarily targeted for business and manufacturing statistics and demographic surveys. In addition to its annual budget, the Bureau will receive \$1.3 billion of the \$2.6 billion allotted for the Decennial Census. In the last fiscal year, the Bureau spent \$451 million on 1990 Census activities and there is some indication that the planned \$2.6 billion may not be enough to complete the process.

In a complete turnaround, the Census Bureau has decided to include nine groups of Asian or Pacific Islanders, plus "Other API" and "Other Race," to be checked off on the 1990 Census form. Before leaving office, President Reagan had vetoed legislation instructing the Bureau to list groups. The Bureau, seeing strong Congressional support—probably even enough to override the veto had Congress been in session—decided to include the check-offs and proceed with the printing of the questionnaires.

Deputy Director Louis Kincannon will be the Acting Director of the Census Bureau until a new director is appointed to succeed retired John Keane.

—Nancy McConnell

Nancy McConnell is director of the Washington, D.C., office of the Population Resource Center. The Center monitors legislative issues of concern to the Population Association of America. Neither the Center nor the Association advocates any particular population policy but works to protect funding for quality demographic research.

SOFTWARE

CENDATA is the U.S. Census Bureau's online information service, making available the latest U.S. demographic and economic data to anyone with a personal computer, a telephone modem, and a subscription to CompuServe or DIALOG.

Among its offerings: population data and projections; estimates for states, metropolitan areas, and countries; estimates of households by states, and various subjects from Current Population Reports. The data base also provides demographic data profiles for 205 countries, as well as such economic statistics as annual business data by county, per cap-

ita income, and key monthly economic indicators. Also included: data from the 1988 Statistical Abstract and the text from Bureau press releases, updated daily.

There is no extra charge for using CENDATA above and beyond the base subscription rates for CompuServe and DIALOG online services. If you subscribe to these services, you already have access to CENDATA. For further information about this Bureau resource, contact CENDATA Program, Data User Services Div., Bureau of the Census, Washington, D.C. 20233. Phone number: (301) 763-2074.

—A.H.

POPULATION UPDATE

Estimated United States Population:

As of December 1, 1988	247,443,000
As of December 1, 1987	245,041,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1029.

Estimated World Population:

As of February 1988	5,180,622,000
Annual growth	89,000,000

Estimated by extrapolation from the mid-1988 population on PRB's *World Population Data Sheet*.

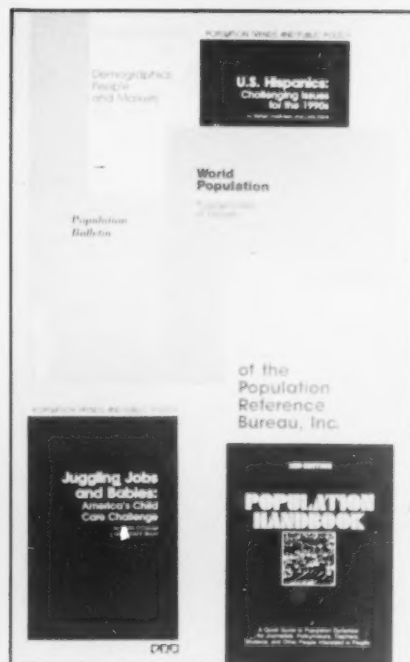
Latest Provisional Statistics for the U.S.: November 1988

Item	12 months ending with November					
	Number		Rate			
	1988	1987	1988	1987	1986	1985
Live births	3,897,000	3,812,000	15.9	15.7	15.5	15.8
Deaths	2,168,000	2,122,000	8.8	8.7	8.7	8.8
Natural increase	1,729,000	1,690,000	7.1	7.0	6.8	7.0
Marriages	2,386,000	2,421,000	9.7	10.0	9.9	10.2
Divorces	1,170,000	1,159,000	4.8	4.8	4.8	5.0
Infant deaths	38,500	37,800	9.9	9.9	10.5	10.5
Population base (in millions)			245.4	243.1	240.8	238.1

Note: Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source: *Monthly Vital Statistics Report* (Vol. 37, No. 11) from the National Center for Health Statistics.

Notification of New Rates



Because of rising production costs, PRB has increased its sale prices for a number of products. The new 1989 rates are:

Population Bulletin, \$7.00 ea. (Bulk copies, 2-10, \$6.50 ea.; 11-50, \$5.50 ea.; 51 or more, \$4.00 ea.)

Population Data Sheets, \$3.00 ea. (Bulk copies, 2-10, \$2.75 ea.; 11-50, \$2.50 ea.)

Population Trends and Public Policy reports, \$5.00 ea. (Bulk copies, 2-10, \$4.50 ea.; 11-50, \$4.00 ea.; 51 or more, \$3.80 ea.)

Population Learning Series Modules, \$3.00 ea. (Bulk copies, 2 or more, \$2.25 ea.)

U.S. orders: Orders of \$50.00 or less must be prepaid. For postage and handling, add \$1.00 or 5 percent of total order (whichever amount is greater). For orders over \$50.00, postage will be included on the invoice at 5 percent.

Orders outside the U.S.: Add \$1.00 or 25 percent of the cost of the publication ordered (whichever amount is greater) to cover postage and handling.

For further information, or to receive a copy of PRB's 1989 Spring publication order form, contact PRB's circulation dept., at (202) 639-8040.

TAKE A NUMBER

We Like To Be: Down by the sea, as it happens. A little over 50 percent of the U.S. population lives within 50 miles of a coastal shoreline, according to the Census Bureau's 1988 edition of the *Statistical Abstract*. About 39.9 percent resides near the oceans and another 12.4 percent reside in the area of the Great Lakes. This proportion has been declining since 1970, however, when it reached 53.7 percent.

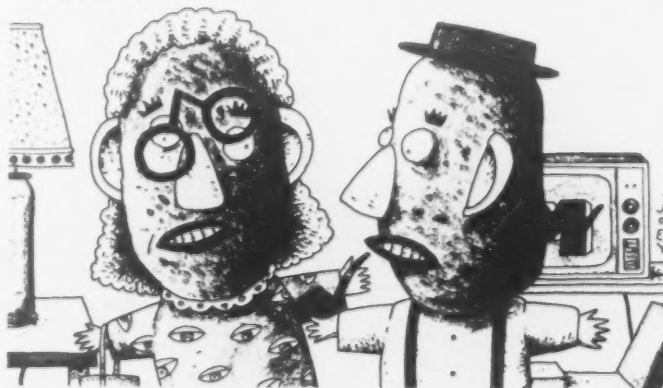
Putting It Off: Delayed marriage is a rapidly increasing phenomenon on the American scene. In 1988, 61 percent of women and 78 percent of men aged 20-24 had never married. This contrasts with 1960 when a majority (54 percent) were already married by age 20 alone. In 1960, only 16 percent of women age 24 had never married, a figure which stands at 44 percent today. These data are from the Census Bureau's Current Population Survey and suggest that some sort of boomlet in marriages could occur when some of the delayed weddings take place, but also suggest that the proportion of Americans never marrying will likely increase.

Here and There: China's birth rate rose again in 1987, to an official total fertility rate of 2.5 children per woman. 1988 survey estimates should be available soon. China's redefinition of many towns from "rural" to "urban" has caused problems for demographers and made China's population appear to have gone from 21 percent urban in 1982 to 47 at present. Italy has wrested the claim to the lowest total fertility rate from West Germany, reporting a rate of 1.31 lifetime births per woman in 1987 compared to 1.38 for West Germany. About 1.8 million undocumented residents have applied for legalization under the provisions of the Immigration Reform and Control Act of 1986 (IRCA), 70 percent of them from Mexico and 55 percent in California, of those, about 82 percent had originally entered the country illegally and the balance had overstayed a nonimmigrant visa. Another 1.3 million applied under the Special Agricultural Worker (SAW) provisions, 82 percent from Mexico and 54 percent in California.

— C.H.

ADDENDA

THEY WERE YOUNG VEGETABLES LIVING IN SIN... THEY WERE COHABITATO HEADS!!



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CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, *POPULATION TODAY*, Population Reference Bureau, 777 14th St. N.W., Washington, D.C. 20005.

BORN UNWANTED: Developmental Effects of Denied Abortion

by Henry P. David, Zdenek Dytrych, Zdenek Matejcek, and Vratislav Schuller. New York: Springer, 1988. 143 pages. \$26.95. ISBN 0-8261-6080-8.

At last, a slim volume documents what we have known "instinctively" that all else being equal, it is better to be born a wanted child rather than an unwanted child.

Henry P. David—a clinical psychologist and director of the Transnational Family Institute—and his Czech colleagues base this conclusion on the findings from their groundbreaking longitudinal study of children in Czechoslovakia whom they studied from childhood through early adulthood. These children, born to mothers who had unsuccessfully applied twice for permission to abort the pregnancy, were studied over the years in terms of cognitive, psychological, academic, health and social variables. Similar studies of unwanted children in Sweden and Finland are also described.

In addition to these remarkable and instructive studies, a major contribution is the discussion of "wantedness." While we think we know what is meant by the slogan, "Every Child a Wanted Child," in reality the concept is far from clear. Better described as a continuum than an either/or situation, it may be manifested as eagerly planned for and delighted parenthood at one extreme to an abhorred pregnancy which ends in infanticide at the other.

In between are unintended conceptions but welcomed or accepted pregnancies; reluctant pregnancies

which turn into cherished babies, planned children whose parents find childrearing burdensome and regret the decision. And some children are loved when they are little but rejected as adolescents. What does it mean to be "wanted" or "unwanted?"

By defining unwantedness operationally as children born to mothers who were twice denied abortion for the same pregnancy, the Prague study avoids the subjectivity of other studies. Additionally, by carefully matching the subjects and controls for socioeconomic status, age of mother, gender, family size, birth order and presence of father or stepfather in the home, the study could concentrate specifically on the effects of unwantedness.

What are the effects? The authors conclude that "involuntary childbearing is rarely conducive to sound public health practice. Unwantedness can pose significant risks for child development, with socially undesirable long-term implications. Hopefully [these studies] will strengthen the worldwide efforts to reduce the incidence of unwanted pregnancy, while maintaining ready access to safe legal abortion for women in need." This book deserves a wide readership.

—Elaine Murphy

BASIC DEMOGRAPHIC MEASURES: A Practical Guide for Users

by John Saunders. Lanham, Md.: University Press of America, 1988. 100 pages. \$17.50. library binding. \$9.75 paper. ISBN 0-8191-7166-2; 0-8191-7167-0.

This short book is packed with demographic measures and concepts, all illustrated and explained with examples and exercises. It can serve as a quick reference guide as well as an introductory text or text supplement for a wide range of courses on population.

Author John Saunders of Mississippi State University walks the

reader through the design of age pyramids and computations for demographic rates and measures, including the life table. The presentation includes basic data, examples of each step in computations, and reinforcing exercises, all of which will be helpful to the professor who wants to have students work things out for themselves.

The book sticks to basics: age-sex composition, fertility, mortality and migration measures, life tables, and the calculation of growth rates. Projections are mentioned, but the user should consult standard texts for how they're done as well as for topics like indirect measurement and population models.

—Thomas W. Merrick

Books Received

THE AMERICAN CENSUS: A Social History, by Margo J. Anderson. New Haven, Conn.: Yale University Press, 1988. 257 pages. \$40.00 (cloth).

CLASS, RACE & GENDER IN AMERICAN EDUCATION, edited by Lois Weis. Albany, N.Y.: State University of New York Press, 1988. 329 pages. \$49.50 (cloth), \$18.95 (paper).

COUNTY AND CITY DATA BOOK 1988, prepared by the U.S. Bureau of the Census. (A Statistical Abstract Supplement). Washington, DC: U.S. Bureau of the Census, 1988. 797 pages.

FAMILY PLANNING AND CHILD SURVIVAL: 100 Developing Countries, edited by John A. Ross et al. New York: Center for Population and Family Health, Columbia University, 1988. 247 pages.

FAO PRODUCTION YEARBOOK 1987 (Vol. 47), Rome: Italy: FAO, 1988. 351 pages. \$30.00 (paper).

NO. 83 CASE STUDIES IN POPULATION POLICY: Nigeria (ST/ESA/SER.R/83), New York: United Nations, 1988. 38 pages.

SOCIAL CHANGE IN BRAZIL: 1945-1985 The Incomplete Transition, edited by Edmar L. Bacha and Herbert S. Klein. Albuquerque, N.M.: University of New Mexico Press, 1989. 146 pages. \$22.00 (paper).

1988 WORLD HEALTH STATISTICS ANNUAL, Geneva, Switzerland: World Health Organization, 1988. 513 pages.

SPOTLIGHT

CHINA

Part I

Population (mid-1988 est.): 1,087 million
Land Area: 3,705,390 sq. miles
Births per 1,000 pop: 24
Deaths per 1,000 pop: 7
Rate of natural increase: 1.7 percent
Total fertility rate: 2.5 children per woman
Infant mortality rate: 44 per 1,000 live births
Life expectancy at birth: 66 years
GNP per capita (1986 est.): \$300
Capital: Beijing

by Gwenda Brophy

By far the world's most populous country, China's actual population size was for decades a matter of speculation. Since 1982, when both a Census and the national 1-in-1,000 fertility survey were undertaken, the flow of demographic data increased from a trickle to a flood.

China, an ancient civilization, is a predominantly rural, low income country, extending over immense portions of East Asia. The vast majority (93 percent) of the population are Han Chinese, but the government recognizes 55 minority groups, numbering 67 million persons in 1982. Despite the ethnic homogeneity, socioeconomic and demographic characteristics vary widely among the country's 29 administrative districts and between rural and urban areas. Although the "one child per couple" policy (to be discussed in Part 2) is a national goal, the average births per woman (Total Fertility Rate) ranged from 1.3 to 4.4 children in 1982, reflecting uneven enforcement of the population policy as well as socioeconomic factors. The national TFR has probably never fallen below 2.1.

China enjoyed a rapid decline in mortality from the 1950s, but this downward trend was reversed during the Great Leap Forward in 1958 and the



famine of 1959-61 when the death rate peaked at 25 per 1,000 and infant mortality reached 220-440 deaths per 1,000 births. Today, the Crude Death Rate is around 7 and the Infant Mortality Rate stands at about 44, far lower than would be anticipated given China's low per capita GNP. The leading causes of death for urban children 1 to 4 years of age is becoming similar to the pattern in the U.S. and other industrialized nations.

The widespread availability of primary health care, including "barefoot doctors," is thought by many to have been instrumental in China's mortality decline.

Chinese fertility has also undergone a revolution in the second half of this century. The Great Leap Forward and famine years brought a precipitous drop in fertility; the TFR declined from 6 in 1951 to 3.3 in 1961, the tail end of the famine. In 1961, the combination of the high death rates and the depressed fertility yielded negative population growth in nearly all provinces.

A massive fertility boom followed the famine as pressures delaying marriages eased, spouses were reunited, and couples were able to have the births postponed during hard times. These factors combined to push the

TFR up to 7.5 in 1963. The TFR fell back to about 6 children until the end of the 1960s, then began a rapid descent, reaching 2.1 in 1984.

The cohorts born during these postfamine years are exerting an upward pressure on the birth rate today as they reach their 20s,

which is the age of almost all child-bearing in China. This structural factor partly explains the increase in the TFR beginning in 1986.

Chinese concern about excessive population growth has fluctuated since the 1950s. The first birth control campaigns were initiated in 1956-58 and 1962-66, meeting with only modest success. In 1961, a mere 1 percent of married women aged 15-49 practiced contraception, 16 percent in 1966. In 1971-77, a new campaign advocated later marriage, birth spacing, and fewer children. Marriage age subsequently rose from 19.5 years in 1971 to 23.5 in 1979, but age at first birth lagged behind increases at age at marriage, in part due to prolonged engagements, which partly fostered an increase in premarital pregnancies, leading to a decline in the marriage-to-first-birth interval. This was one of the factors influencing a change of policy unique in both goals and means.

Gwenda Brophy is currently at PRB. She holds an M.Sc. in Demography from the London School of Economics.

This is Part I of a 2 part series highlighting key features in demographic developments and trends in China.

POPULATION TODAY

Vol 17 No 4 April 1989

FEATURES

- 3 The Census Bureau's new computer map—not just a paper TIGER**
Putting the whole country's households and places into one data base is vital to conducting next year's decennial headcount
- 4 How the world's least developed countries are faring**
41 nations, containing 8 percent of humanity, have disproportionate share of global woes
- 5 Botswana reports significant drop in fertility**
Preliminary survey results from 1988 indicate women are having an average of 5.0 lifetime births, down from 7.0 in 1981, if confirmed, it would mark the result of a dramatic shift toward effective contraceptive methods
- 6 An interview with Peng Peiyun about the one-child policy . . .**
China's new family planning leader talks freely about population planning and counsels education and development, not confrontation
- 12 . . . as faithfulness to China's ambitious population program varies**
The "One-Child Certificate Rate" among all married fecund women was 18 percent in 1985; second births creep up a little

DEPARTMENTS

- 2 From the editor's desk**
- 2 Speaking graphically**
- 5 Survey report (Botswana)**
- 9 Softwhere**
- 9 Population update**
- 10 Take a number**
- 11 Current readings**
- 12 Spotlight (China)**



TIGER is coming. (See page 3.)



PRB

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FROM THE EDITOR'S DESK

Concern over the ozone layer in our atmosphere has increased with new findings that suggest its deterioration has been more rapid than previously imagined. The less ozone to filter out the sun, the more the sun's ultraviolet rays will damage life on earth.

International conferences have been held to confer about the problem and how to respond to it (a prime cause is considered to be pollution from industrial chlorofluorocarbons). And clearly, ozone is a sobering topic.

To us, one of its most interesting aspects is population-grounded. If the ozone layer becomes a source of acute public anxiety, you may expect migration a-plenty. Those people who used to sport "Life's A Beach

bumper stickers would be the first to scurry off for new abodes underneath the glowering February skies of western New York state, the better to appreciate Buffaloman vistas of snow clouds drifting off Lake Erie to block the garish sun.

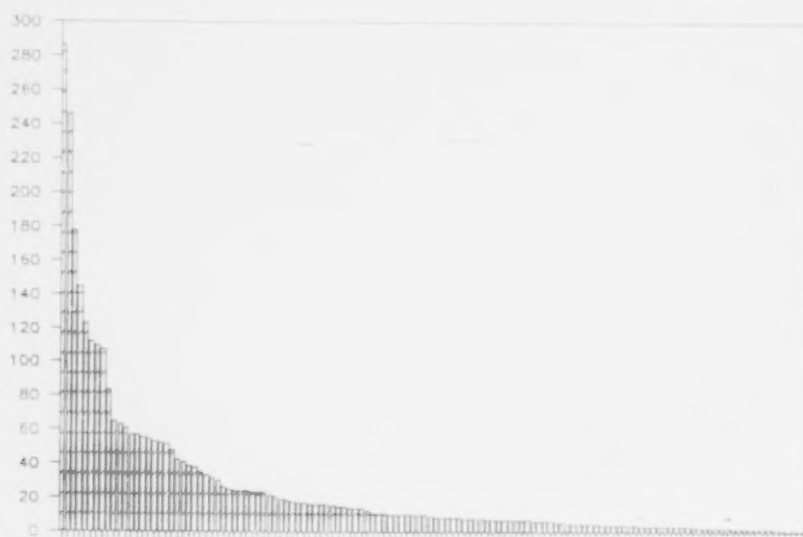
There's no indication that a stampede to the Frost Belt is currently in sight. But history has shown that population trends have a will all their own. And every decade or two there's a demographic surprise—not ozone, hopefully—that confounds the conventional wisdom of extrapolating today's trends (e.g. the rush to the Ultraviolet—or Sun Belt) endlessly into tomorrow.

—Art Haupt

SPEAKING GRAPHICALLY

Little, Big

Thousands



The graph above shows the distribution of country population size around the world, ranging from the USSR (Number 3 in population) to Mauritania (Number 181).

Numbers 1 and 2—China and India—have been omitted simply for visual clarity, just take our word that their bars tower over every other nation. For the same reason, the graph shows no country with less than 1 million, even though there are approximately 82 of these entities.

Among countries with 1 million population or more, the median size is 10.5 million, the average is 18 million.

Source: PRB's 1988 World Population Data Sheet.

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Census's TIGER Now Unleashed

One year from this month, the U.S.'s decennial census will take place.

A total of 470,000 people will have worked on the census at some time during the process. Some 484 temporary field offices, 13 regional census centers, and seven processing centers will be involved, at a total cost of at least \$2.6 billion.

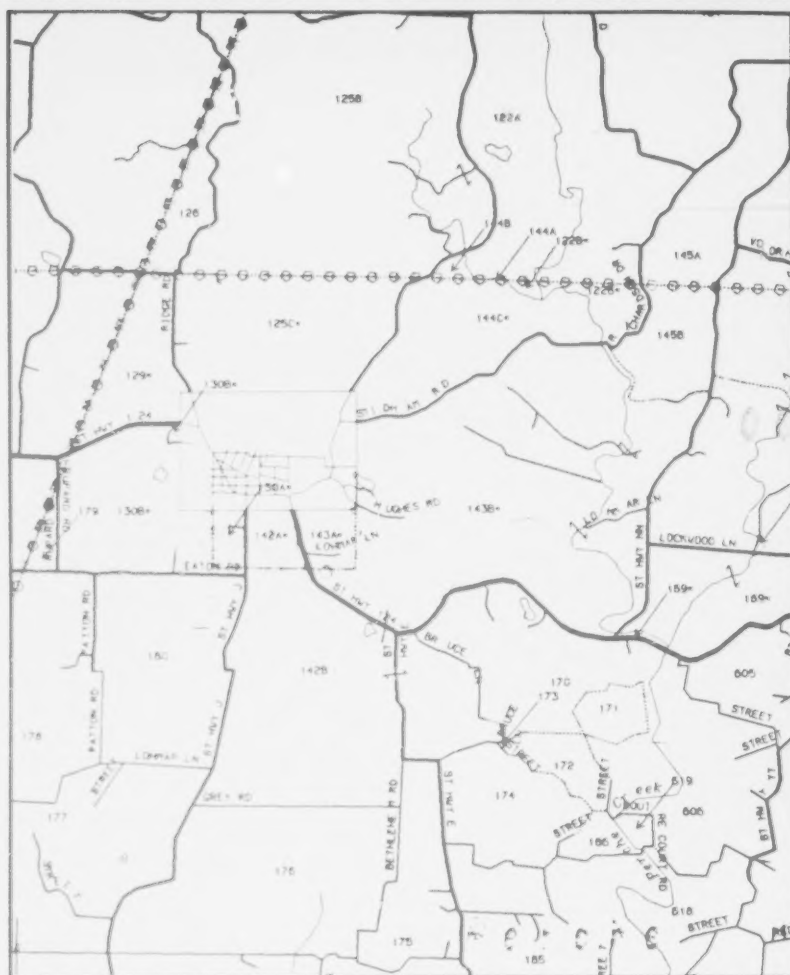
Action of the Tiger

There are many innovations since the 1980 Census, including new methods of streamlining the processing of some 100 million questionnaires. One crucial foundation of next year's Census is already being put in place: TIGER, the national "map" that will be used as the basis of both enumerating the country during the census and generating the data reports that result.

Sales to the public started in February 1989 of prototypes of TIGER/Line files. Now 35 states are available (\$175 each plus \$15 per county). The entire U.S., Puerto Rico, and outlying areas will be covered.

What is TIGER? It is essentially a map of the U.S. — including all census-significant addresses — that has been shoehorned into a mainframe computer. Or to put it another way, it's a unified data base of all the census-relevant geographic nodes in the U.S. These numbers and their relationships can be churned out as a list of addresses, as a map of a particular area, or as a report of data for that area.

Facilitating the decennial census itself, TIGER (which stands for Topologically Integrated Encoding and Referencing system) will make possible for the first time the automation of mapping and related geographic activities essential for the conduct of the census. Mailing lists will be entered and checked against the parameters of TIGER. Enumerators will carry TIGER maps when they go out to check non-responses to mailed-out questionnaires. (The decennial census is 90 percent a mail-out, mail-back operation.) Later on, when the data are released, TIGER will make possible the organized dissemination of data.



It's not enough to count heads, a census must also stipulate *where* the people are who are being counted (and, of course, be sure it doesn't miss anyone or count the same person twice). In more sedate days in a smaller United States, special maps, drawn by the Census Bureau for its enumerators, subdivided the country into counties, tracts, and blocks. These roving head-counters, who before 1960 visited every household in the nation, assigned individual houses to the appropriate census block as they tallied them.

But with the growth of the country, the need has increased for more efficient (i.e., cheaper) enumeration and more geographically detailed analysis. Door-to-door census taking was largely

replaced by mail-out, mail-back forms in 1970, requiring massive address lists. These were matched to tables showing streets and ranges of addresses and their place in the Bureau's statistical areas.

Because the maps, addresses, and organization of statistical areas – each containing myriads of detail – were constructed independently, they often varied slightly, leaving room for discrepancies and errors. For the 1980 Census, the process was automated one more step with the GBE/DIME files (Geographic Base Files, or Dual Independent Map Encoding Files), which included geographic reference points in their list of addresses and

Continued on next page

Census's TIGER

Continued from previous page

areas. Using these reference points, a computer could assign additional addresses, as they became available, into the appropriate blocks. (The GBF/DIME files covered only the urbanized portions of Standard Metropolitan Statistical Areas.)

In 1981, thanks to modern advances in computer capability, the Bureau began to plan TIGER—a data base system directly founded on the coordinates of the U.S. Geographical Survey's 1:100,000 national map series. On top of the coordinates came the boundaries, both political and statistical, and within those the addresses of every household. Now, for the first time the different reference files that were previously required to conduct a census could be consolidated into one unified whole.

Data Cornucopia

A TIGER File (specifically, a TIGER/Line file) contains digital data for political boundaries, statistical area boundaries (such as census tracts and blocks), features (roads, railroads, rivers, etc.), feature names, and alternate feature names. It will also contain latitude/longitude coordinates for the boundaries. In addition, within metro areas, it will have address ranges and ZIP Codes for streets.

TIGER maps will contain the correct addresses in the right statistical areas. When questionnaires come in, their data will be geographically organized in the format of the TIGER Files. Besides greater accuracy in planning and conducting the census, TIGER will facilitate the generation of data reports from census results.

During 1989, prototype and precensus versions of TIGER/Line files will be released. Starting in April 1991, post-census maps will start coming out. Sometime in late spring or early summer 1991 and continuing through the rest of the year, digital files will become available, starting with TIGER/Line files of the most up-to-date boundaries.

For further information on TIGER, contact the Data User Services Div., Bureau of the Census, Washington, D.C. 20233, Phone (301) 763-4100.

The World's Poorest 370 Million People

"Less developed countries" (LDCs) is a broad category, considering that these countries, as defined by the UN, encompass 77 percent of all the people in the world.

Avoiding controversy, the UN defines LDCs by geography—an LDC is a country located anywhere on earth but Europe, North America, the USSR, and Australia-New Zealand. Such a definition takes in a broad spectrum of countries ranging widely in their development and economic status, from booming nations in the developing world that might be termed, in 1980s jargon, newly industrialized countries ("NICs") to those countries in the direst economic condition that the UN puts in the category "least developed."

What least developed countries? According to the UN's Population Division newsletter, there are 41 countries in this category. Their average per-capita gross national product is slightly over \$200 as of 1985. (The wealthiest is Botswana, with \$1,030; the poorest is Ethiopia, with \$120.) They contain a total population of about 370 million, about 8 percent of the world total. The majority are in Africa, and just one (Haiti) is in the Western Hemisphere.

In general, these countries are also those that have not yet begun the demographic transition, the UN points out. "Indeed, the current rate of population growth of the least developed countries is quite similar to that of all developing countries during the later 1960s." Expectation of life is about what it was then, while total fertility is probably higher than it has ever been for all developing countries. In short, of all countries, the least developed ones have also been the ones least affected by the worldwide trends of demographic change.

Over the past 20 to 25 years, the total fertility rate (TFR) has fallen steadily in most of the rest of the less developed countries, from 5.9 lifetime children per woman in 1965-1970 to 4.0 in 1989. During that same period, fertility in the least developed countries

has remained relatively high, at around 6.5.

Mortality conditions have improved in these countries, though they have not had the bump-up in life expectancy experienced by most other LDCs. In 1970-1975, life expectancy at birth averaged 44 years, a figure that rose to 47 years in 1980-1985. By the end of the century, the UN expects this to increase to 53 years.

In the LDCs as a whole, life expectancy was 58 years in 1980-1985, while in the more developed countries, it was 73. Hence the least developed countries are 10 years of life behind the LDCs as a whole, and about 25 years behind the industrialized countries.

Improvements in the least developed countries' infant mortality rates have been made. Nonetheless, most of this group of countries remain in the triple-digit area, i.e., there is at least one infant death for every 10 live births. Infant mortality rates for LDCs as a whole have improved more, averaging under 100 (for probably the first time in history) starting in the 1975-1980 period. Infant mortality for the industrialized world remains relatively low, at 16, due to widespread availability of health care and prenatal care.

Though fertility rates have yet to decline, these countries' perceptions of the growth rate has shown a shift from the time, some 15 years ago, when population growth was more widely regarded as satisfactory by the governments. Now, of the 41 countries, the *Population Newsletter* reports, 22 "view their rate of growth as too high. In addition, 16 of the 22 countries report interventions to lower their rates of growth. The 22 that view their rate of population growth as too high account for nearly two-thirds of the total population of the least developed countries."

Three countries in the group—Bhutan, Equatorial Guinea, and Laos—consider their growth rates too low. The remaining 16 countries find their growth rates to be satisfactory.

Although most governments in this

Continued on page 8

SURVEY REPORT

Botswana

Situated below the equator in Africa, Botswana is bordered by South Africa, Namibia, and Zimbabwe. Largely desert, it is one of the continent's least densely populated countries, with only 1.3 million people. Nevertheless, the national government views Botswana's traditionally high fertility as detrimental to health goals, and since the 1970s has supported the integration of family planning with maternal and child health services.

The results of Botswana's 1988 Demographic and Health Survey (DHS), conducted under Westinghouse's Institute for Resource Development, indicate that fertility is continuing to drop. The preliminary results of the survey of 4,366 women aged 15 to 49, measured a total fertility rate (TFR) of 5.0 lifetime births per woman. If these stunning results hold up under further study, they would constitute a substantial decline over estimated TFRs of 7.0 in 1981 and 6.5 in 1984.

Increased contraceptive use is one explanation for the impressive fertility decline. The 1988 DHS showed that 30 percent of all women surveyed and 33 percent of women in union were using a contraceptive method at the time of the study. A 1984 fertility survey showed that 28 percent of women in unions—a figure almost as high—were using family planning, but there appears to have been a dramatic shift toward reliance on more effective methods in the second half of the 1980s. While only 19 percent of the married women used modern methods at the time of the 1984 survey, the DHS found that 32 percent of the married women, and 28 percent of all women were using a modern family planning method.



Health of Botswana's children has been improved.

The pill accounted for about one-half of all contraceptive use, employed by 15 percent of the married women; 6 percent (each) used the IUD and injectable hormones; 5 percent were sterilized; 1 percent used other modern methods. Only 1.3 percent reported using a traditional method, a sharp contrast to 10 percent in 1984.

The growing acceptance of family planning among women is a testimony to the success of the government-sponsored services and educational outreach efforts which include home visits, community meetings, and mass media campaigns. Knowledge of family planning has also increased, from 78 percent of all women in 1984 to 95 percent in 1988. Most women obtained their contraceptives from a government health facility, underscoring the strong government role in serving this largely rural population.

The survey also revealed that

two out of three women currently in union wanted to cease or delay having more children, and are potential users of family planning.

The preliminary report also presented data about pre- and postnatal maternal health care, teenage pregnancy, and the health status of young children. Only about 10 percent of the children under age 5 had experienced diarrhea in the 2 weeks preceding the survey. About 66 percent of these ill children had been treated with Oral Rehydration Therapy, a very high percentage compared with the DHS results from other African countries.

The final report will include more detailed data on fertility and family planning as well as information on breastfeeding, the awareness of AIDS, and the women's background characteristics.

— M.K.

DEMOGRAPHER'S PAGE.

Second Thoughts on the Second Child: A Talk with Peng Peiyun

by H. Yuan Tien

Peng Peiyun is not yet a household name in the People's Republic of China. But because of her position, she is a presence in the households of many hundreds of millions of Chinese. She is the fourth person to head the National Family Planning Commission during the 1980s.

On Dec. 31, 1988, Madame Peng graciously came to see me at the Beijing University Guest House at 9 a.m. Sipping occasionally on the cup of tea that I had poured, she talked more than 90 minutes about her first year in office.

The Commission was reconstituted and elevated to cabinet status in 1981. A reduction of some 50 percent in the birth rate had already occurred, distinguishing the 1970s as China's greatest decade of population planning success. The 1980s, however, have turned out to be a decade of population planning controversies. Symptomatic of this has been the rapid turnover in the Commission's top leadership. The repercussions of the "one child per couple" policy, introduced in 1979, have proved major. Madame Peng's two immediate predecessors served in 1982-1983 and 1984-1987, respectively. Stringent directives on implementing the policy of minimal reproduction characterized the former period and caused dissension. The latter years saw growing exceptions according to local circumstances, as well as increased births. (For more on China's population and the one-child family, see this month's Take a Number, page 10, and

Spotlight, page 12.) It thus was of enormous interest to learn directly from her about the state of China's population planning affairs.

Born in 1929, Madame Peng came from Hunan province. Having graduated with a major in sociology from Qing Hua University, she was assigned to work in the campus branch of the party at Beijing University. Her career shifted to the Science and Technology Commission in the 1970s and then to the Education Commission headed by Mr. Li Peng, the current Premier. Madame Peng was selected because, as she related, Mr. Li deemed it important to place a person with substantial experience in education in charge of the Family Planning Commission. Her elevation was to emphasize education in implementing population planning programs.

Some Second Thoughts

The demographic education of China's policymakers that began in the 1950s eventually produced, after fiery exchanges, a national consensus more than a decade later. What may be termed China's Strategic Demographic Initiative ensued. Vigorous and varied efforts in the 1970s swiftly depressed the birth rate to below 20 per 1,000 population. The "one child per couple" policy was then inaugurated with fanfare. A great leap in aim was involved: this move would beget a much smaller population in the long run, serving to turn back the population clock. In the short run, it would keep the total 2000 population from exceeding 1.2 billion.

Such quantitatively exact tactics and goals, however, proved to be too rapid for acceptance at the provincial and grass-roots levels. Strong doubt has persisted over the feasibility of limiting the century-end population to 1.2 billion. Loud concerns have been voiced about the immediate and eventual consequences of the "one child per couple" drive.

Madame Peng readily acknowledged the existence and scope of these



Family planning's Peng

controversies, as well as the resistance encountered in dissuading couples from having a second child. In macro-economic terms, she accepted the premises of the proponents of the "one child" policy, and reiterated that, given the country's demographic base, population control is both imperative and correct. On the other hand, the plethora of second thoughts on the second child articulated by many in China since 1979 have also influenced her appreciation of the realities. Their impact has also been much reinforced in the course of her touring 10 provinces during this past year.

As Madame Peng tersely reflected: "Though peasant couples may not want 5 or 6 children, it is extremely difficult for them to heed the 'one child' limit." Their concerns for labor shortage and old age security are part and parcel of the realities amid economic underdevelopment and harsh living conditions in many regions. The under-reporting of female first births has been and continues to be extensive in rural areas and underscores the widespread desire for male offspring. Besides outright defiance, Madame Peng alluded to the many devious ways in which couples have managed to have more than one child. Second births thus have actually been much more numerous

than permitted

Madame Peng pointed to the more than a dozen categories of exemptions that have been allowed at the start and since have been added to the provincial regulations. Moreover, she declared, "In the countryside, couples will now be allowed a second chance after an appropriate interval should their first child be a girl." I asked whether some 48 percent of rural couples with only one child would thus be eligible as only a little over 50 percent of first births are usually boys. She answered in the affirmative.

This declaration formally confirms a continuous shift in the extent to which couples with one child are to have a second chance. In 1982, the stipulation was 5 percent. It was increased to 10 percent in 1984 and to 20 percent in 1986.¹ However, the leap upward to 48 percent is more apparent than real. Census and survey data in recent years consistently show that relative to first births, second births currently have actually been about 55-60 percent as numerous.² In actuality, therefore, many future second births will still exceed the raised limit. Nevertheless, the second thoughts on the second child have evidently moved policy guidelines closer to reality.

A National Family Planning Law?

China's Strategic Demographic Initiative has been and still is largely based on administrative directives and ad hoc local regulations. Whether and how to enact a national family planning law has long been under dispute. The controversy is mainly over what the ideal family size should be for the nation as a whole. Madame Peng observed that now, as in the recent past, some insist on one child while others call for two children. However, under the present circumstances, insisting on "one child" in a national law would only perpetuate the large non-observance. On the other hand, she continued, official reference to "two

children" would enhance the likelihood of still more third births. Using "1.5 births" is adequate for population projections, but makes no sense at the behavioral level.

Adding to the dilemma, she noted, are the implications of formally allowing a second birth when the first child is a girl. The practice contravenes the principle of gender equality. An official and unqualified endorsement, therefore, has been resisted by women's groups.

The situation thus far is, Madame Peng observed, hardly ripe for a national population planning law. Nor is it advisable to adopt uniform policy guidelines because the country is too vast and too diverse. Taking into account local conditions, therefore, some 16 provincial people's congresses

Rural couples
with a daughter
"will now be allowed
a second chance"

up to now have adopted their own regulations. The process of codifying similar regulations is under way in the other 13 provinces, municipalities, and regions. All this breathes a greater stability into population planning programs.

Education

Family planning regulations such as those adopted by Tianjin Municipality in November 1988, provide for fines in the case of couples who have a second child without approval. The salience of these provisions is, in Madame Peng's view, very limited. The amount of fines is either too small to really hurt in the case of the relatively better-off couples or too large to be actually collectible in the case of the very poor. More important, she stressed, this confronta-

tional approach harms the party tradition of striving to maintain unity with the people.

A much greater reliance, Madame Peng averred, must be placed on "education" in family planning activities. More systematic and comprehensive efforts should and would be made to convince the masses of the need to control population growth in macro-economic terms. Science should also be popularized, and be part of more broad and more detailed programs to disseminate contraceptive knowledge. Sex education must also be strengthened, both among couples-to-be and teenagers.

The quality of family planning personnel at the local level, she lamented, leaves much to be desired, especially when the main approach lies in education rather than administrative fiat. At the national level, much more information is also needed to improve the quality of population decisions. Accordingly, within her one year in office, she established a National Committee of Consultants on Family Planning this past summer, that includes experts from the provinces and academia. She also most enthusiastically disclosed that just two days before our conversation, a major branch (China Population Information Center) of the National Family Planning Commission has been reorganized, and renamed China Population Information and Research Center.

As Madame Peng sees it, her twin tasks are to simultaneously implement population planning decisions issued in Beijing and enable tens of millions of couples at large to realize their fertility aspirations. The contradictions are deep and sharp. She deemed it imperative that they be overcome through education. She recognized that, no matter what, many a couple will not be dissuaded or deterred from having more than one or two children. As the level of fertility is generally lower in China's cities and better-off provinces along the coast, she stressed that only

Continued on page 8

The World's Poorest

Continued from page 4

group may want to reduce their countries' population growth, the youthful age structure typical of LDCs may prove an obstacle. In the least developed countries, some 45 percent of the population as of 1985 were children under 15. In addition, the dependency ratio – the ratio of those under 15 and

over 60 to those in the working ages in between – has risen over the past three decades, due to continuing high fertility combined with improvements in life expectancy. Whereas this figure stood at 102 in 1950 (102 persons in the dependency group per 100 working-age persons), by 1985 it had risen to 113.

Source: *Population Newsletter*, No. 46, December 1988, issued by the Population Division, United Nations.

Population and Other Characteristics of the "Least Developed" Group of Countries

Country	1980-1985					1987 GNP per capita (US \$)
	1985 total pop. (thousands)	Pop. change (percent)	Total fertility rate	Life exp. at birth (yrs.)	Infant mort.	
Afghanistan	14,519	-2.0	6.9	40.5	183	—
Bangladesh	101,147	2.7	6.2	48.6	128	160
Benin	4,050	3.0	7.0	44.0	120	300
Bhutan	1,362	1.8	5.5	45.9	139	150
Botswana	1,078	3.6	6.5	56.0	76	1,030
Burkina Faso	7,882	2.5	6.5	45.2	149	170
Burma	37,544	2.1	4.6	57.5	80	—
Burundi	4,721	2.8	6.4	46.5	124	240
Cape Verde	330	2.2	5.2	59.0	75	500
Central Afr. Republic	2,576	2.3	5.9	43.0	142	330
Chad	5,018	2.3	5.9	43.0	143	150
Comoros	444	3.0	6.1	50.0	88	380
Djibouti	350	3.1	6.6	45.0	132	—
Equatorial Guinea	392	2.2	5.7	44.0	137	—
Ethiopia	42,271	1.7	6.0	40.0	159	120
Gambia	745	3.0	6.5	41.0	154	220
Guinea	6,075	2.3	6.2	40.2	159	—
Guinea-Bissau	889	1.9	5.4	43.09	143	170
Haiti	5,922	1.8	5.0	52.7	128	360
Kiribati	64	1.6	—	—	—	480
Laos	3,594	2.3	6.2	46.0	122	160
Lesotho	1,538	2.8	5.8	53.4	111	360
Malawi	7,141	3.2	7.0	45.0	163	160
Maldives	183	3.3	—	—	—	300
Mali	8,082	2.8	6.7	42.5	180	200
Mauritania	1,766	2.6	6.5	44.0	137	440
Nepal	16,915	2.6	6.2	48.3	139	160
Niger	6,115	2.8	7.1	42.5	146	280
Rwanda	6,102	3.3	8.5	46.5	132	310
Sao Tome	97	2.7	—	—	—	280
Sierra Leone	3,665	2.3	6.5	39.0	166	300
Somalia	6,398	3.6	6.6	43.0	143	290
Sudan	21,818	3.1	6.6	47.8	118	330
Tanzania	22,751	3.7	7.1	51.0	115	220
Togo	2,960	3.0	6.1	50.5	102	300
Tuvalu	8	1.6	—	—	—	—
Uganda	15,491	3.3	6.9	49.0	112	260
Vanuatu	142	3.9	—	—	—	—
Western Samoa	163	1.0	—	—	—	560
Yemen, South	2,137	2.8	6.8	48.4	135	420
Yemen, North	6,888	2.8	7.1	48.4	130	580
Least Developed	371,335	2.4	6.2	47.1	133	—
Less Developed	3,680,188	2.1	4.2	57.6	89	—
More Developed	1,173,660	-0.7	1.9	72.3	16	—

Source: *Population Newsletter*, No. 46, December 1988 and *World Bank Atlas 1989*

Demographer's Page

Continued from previous page

economic development and general improvement in living standards can help minimize the contradictions between national population planning goals and people's fertility aspirations.

Population in 2000?

"To keep the total population within 1.2 billion by the end of the century" was initially envisioned in China's Strategic Demographic Initiative. It then became one of holding it to "around 1.2 billion." Some have recently warned of the possibility of exceeding 1.28 billion.¹ Madame Peng envisioned a total population of 1.27 billion in the year 2000.

As of the end of the first quarter of 1989, the government has officially stated, China's population will have topped 1.1 billion.² The gains during the seven years since the census of 1982 thus will have amounted to some 92 million, or more than 13 million per year. Will then the current outlook on population size in 2000 be on the mark? If not, how much larger will the total probably be a dozen years from now?

Implicitly, the thrust of Madame Peng's assessment rests on an assumed average of more than one child (1.5 births, to be exact) per couple. Coincidentally, the average annual increase must not exceed 1.5 percent if the total population is to be no greater than 1.27 billion at the end of the century, as she has envisioned. However, women reaching the prime childbearing years, 20-34, will soon make up more than half of the women in the reproductive age, 15-49. The number of births during the next dozen years thus will be certainly greater than during the 1980s. More important, in view of the level of population planning accomplishments during the recent past, the likelihood of achieving an average of 1.5 births per couple is extremely uncertain. Now, as in the 1980s, China's TFR still hovers around 2.3. An average annual increase is most likely to be about 1.62 percent. All things considered, therefore, I mentioned to Madame Peng that, as I had previously calculated in

1983, the Chinese population will probably reach 1.35 billion in the year 2000.⁵ She politely demurred, saying that through education, China can succeed in curbing population growth.

Still, a new chapter now is unfolding in China's Strategic Demographic Initiative. Its focus has already been redirected in recent months. The shift was made explicitly formal at a major "mobilization conference" on family planning work in Beijing in January.⁶ The "one child" ideal, once ubiquitous in official releases, received no mention at all in the news report on the conference. Rather, the present efforts are to reduce (or, where possible, eliminate) births of third and higher parities and births among legally underage couples (15 percent and 10 percent, respectively, of some 25 million births in 1987).⁷ The "one child" ideal thus may, in light of both the steady de-escalation in implementing it across the board and Madame Peng's comments, be said to have seen its day. The shift in tactics arising from the second thoughts on the second child has, at the very least, much attenuated its severity and controversial role in China's population program.

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6. *People's Daily* (Overseas Edition), January 13, 1989.
7. *Ibid.*

SOFTWARE

Atlas*Graphics is a mapping program for personal computers which creates shaded or color-coded maps of any part of the world or of the U.S. (A zoom capability allows you to define any portion of a map as the map to be worked with.) The map can then be generated on a printer or plotter, even in color assuming your output device supports color.

Areas of the maps you create can be automatically coded by means of shading (crosshatching, etc.) or color, according to data ranges you select. You can also

select boundaries or cities, include labels, and even "explode" specified regions for greater emphasis. Statistical data can be imported into the data base used with the map, or exported from it.

Atlas*Graphics (2 1) requires an IBM-compatible computer with at least 512K memory, a mono or color graphics adapter, and either two floppy drives or one floppy drive and a hard drive. Its price is \$450. Contact: STSC, Inc., 2115 East Jefferson St., Rockville, Md. 20852 phone (301) 984-5123.

—A.H.

POPULATION UPDATE

Estimated United States Population:

As of December 1, 1988	247,443,000
As of December 1, 1987	245,041,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1029.

Estimated World Population:

As of February 1989	5,180,622,000
Annual growth	89,000,000

Estimated by extrapolation from the mid-1988 population on PRB's *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: November 1988

Item	12 months ending with November						
	Number		Rate				
	1988	1987	1988	1987	1986	1985	
Live births	3,897,000	3,812,000	15.9	15.7	15.5	15.8	
Deaths	2,168,000	2,122,000	8.8	8.7	8.7	8.8	
Natural increase	1,729,000	1,690,000	7.1	7.0	6.8	7.0	
Marriages	2,386,000	2,421,000	9.7	10.0	9.9	10.2	
Divorces	1,170,000	1,159,000	4.8	4.8	4.8	5.0	
Infant deaths	38,500	37,800	9.9	9.9	10.5	10.5	
Population base (in millions)			245.4	243.1	240.8	238.1	

Note: Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source: *Monthly Vital Statistics Report* (Vol. 37, No. 11) from the National Center for Health Statistics.

TAKE A NUMBER

Flap Over Chinese Data: It now appears that China may well exceed the target of a 1.2 billion population in 2000, a goal often quoted in official speeches and documents. Recent press reports on increases in the Chinese birth rate have pointed out that the rise is likely due to some relaxation in the family planning program as well as the large cohorts reaching childbearing age and an improving economy. (See this month's Demographer's Page and Spotlight.) The result has been a significant bulge in births—from some 18 million in 1984 to 22 million in 1986 to 25 million in 1987.

Nevertheless, press statements to the effect that China's birth rate is "out of control" are probably exaggerated. The rise in the total fertility rate (TFR) to about 2.5 lifetime births per woman in 1987 from 2.1 several years earlier is noteworthy, but fertility in China remains very low for a developing country. It is also doubtful that many Chinese officials ever expected *all* women to have just one child. (See this month's Demographer's Page,

page 6.) Rather the commitment of many to do so was a major factor in lowering the national birth rate. A national TFR of 1.0 would lead to a population top-heavy with the aged as well, a fact realized by many Chinese. Further, the 1.2 billion figure for the year 2000 population was an oft-stated goal, but intended as a target for that year, not a stationary population size. It has long been recognized that the post-2000 population would easily grow to 1.5 billion or more. Another issue for China-watchers is the percent urban figure now being reported. The official data suggest a rapidly urbanizing population, from 21 percent in the 1982 Census to 47 percent in 1987, but this apparent increase is largely a result of redefinition of urban territory. Hopefully, the urban definition used in the coun-

try's 1990 Census will correct this confusing state of affairs.

Here and There Just in the latest results from the 1988 U.S. Presidential Election. Nobody was the *de facto* choice of 43 percent, as participation fell to 57 percent of the voting-age population, the first drop since 1976. Only 29 percent of voting-age Hispanics participated, compared to 52 percent for blacks and 59 for whites. 1987 household income rose to \$25,990 in 1987, from \$24,900 in 1986, but, this 4.4 percent rise was offset by inflation, resulting in no significant increase after all. Regionally, only the Northeast showed a rise in real income for the period. Official projections for Austria show a population of 6.0 million in 2050, down from 7.6 today.

—C.H.

ADDENDA



This is the western extremity of the U.S.-Mexican border, as seen from Mexico. While the border itself runs for 1,933 miles, the border fence is 50 yards shorter. Note also the hole cut in the fence, presumably by someone who did not wish to walk around it.

CLARIFICATION

In the article "AIDS Worldwide" (February 1989 *PT*), a statement appears to the effect that "it is believed" that all people who test positive to the HIV virus will develop the AIDS disease. But not enough time has elapsed for more than early studies of this important variable. The ultimate percentage of HIV-exposed persons who develop AIDS or the period of time involved remains a matter of continuing investigation.

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in *Current Readings*. Publishers may address review copies to Book Review Editor, *POPULATION TODAY*, Population Reference Bureau, 777 14th St. N.W., Washington, D.C. 20005.

INDONESIA: The Transmigration Program in Perspective

a World Bank Country Study. Washington, D.C. The World Bank, 1988. 227 pages. \$17.95 paper. ISBN 0-8213-1092-5.

Since 1905, Indonesia has experienced a variety of resettlement, or transmigration, programs amounting to the world's largest voluntary, government-sponsored resettlement scheme. These programs were designed to move people from the overcrowded inner islands (Java, Madura, Bali, and Lombok) to the land-rich outer islands (Sumatra, Kalimantan, and Sulawesi) in hopes of making better use of both human and natural resources. Despite their long history, these programs did not move a significant number of people until the second five-year plan (1974-1979) and the scale increased dramatically during the third five-year plan (1979-1984). During that time the program resettled about 366,000 families, or 1.5 million people — constituting nearly three-quarters — of the all families resettled during the entire resettlement period. In addition, some 170,000 families moved without government assistance.

Plans for continuing a large transmigration program during the fourth five-year period were drastically reduced as part of budgetary response to declining oil revenues. The government of Indonesia also decided it was an appropriate time to make a detailed assessment of the successes and failures of transmigration before deciding whether to refund the program. This volume, prepared by the World Bank, is a

report of that assessment which covers such topics as migrant welfare, economic and financial analysis, demographic impact, social and environmental considerations, and factors affecting the scale of the program in the future.

According to the report: "The fact that transmigrants move voluntarily to pioneer settlements involving considerable hardship attests to the economic pressures on poor farmers in Java and Bali and to the opportunities they perceive in the outer islands. The fact that farmers settled under the sponsored program were, on the whole, moved in a safe and orderly way is commendable. However, the scale and rate of acceleration of the program [in recent years] have also given rise to a number of problems in need of attention." The report offers a series of recommendations covering such areas as improving infrastructure in existing resettlement sites, taking the needs of spontaneous migrants into account, and addressing environmental concerns.

— Nancy Yinger

POPULATION GROWTH IN LATIN AMERICA AND U.S. NATIONAL SECURITY

edited by John Saunders. Winchester, Mass.: Allen & Unwin, 1986. 305 pages. \$44.95 cloth. ISBN 0-04-497002-1.

Since 1950, population in Latin America has increased by 2½ times, while North America grew by 60 percent — both had populations of about 165 million in 1950. Even with slower growth in Latin America, its population will probably end up being twice as large as North America's before the two reach some form of population stabilization. Because of their geographic proximity and common economic and political ties, population trends in Latin America have major

implications for the security interests of North America.

This theme was the focus of a recent conference at Mississippi State University's Center for International Security and Strategic Studies, and the papers presented at the meeting have been edited in this volume by John Saunders. It brings together expertise in demography, sociology, political science, international affairs, and related fields.

The papers are divided into two groups, one providing a demographic perspective and the other examining security dimensions. On the demographic side, Stykos reviews current and prospective population trends; Gendell examines the links between population growth and labor absorption; Diaz-Briquets and Macisco analyze emigration trends; Musgrove discusses the question of food supply; and Clinton looks at the extent to which population growth is eroding development efforts.

In the section on security, Howard and Ieda Wiarda's study links between demographic factors and internal unrest in Latin America; Mason examines the contribution of demographic factors to the current crisis in Central America; Papp links the labor absorption and food supply issues to U.S. security interests; Hayes provides a similar focus on economic questions; and Taylor discusses military regimes and military assistance.

Introductory papers by DeWitt and Saunders provide a thoughtful context for the reader to think through the complex issues involved. The volume provides no ready answers, but provides a broad range of experience and insight for those interested in the implications of Latin American population trends.

— Thomas W. Merrick

SPOTLIGHT

CHINA

Part II

Population (mid-1988 est.): 1,087 million
Land Area: 3,705,390 sq. miles
Births per 1,000 pop: 24
Deaths per 1,000 pop: 7
Rate of natural increase: 1.7 percent
Total fertility rate: 2.5 children per woman
Infant mortality rate: 44 deaths per 1,000 live births
Life expectancy: 66 years
GNP per capita (1986 est.) \$300
Capital: Beijing

by Gwenda Brophy

The first installment of this two-part Spotlight focused on China's fertility history and present trends—mostly downward. This installment focuses on the family-planning policy to limit births to one child.

The one-child policy was promulgated in 1979. Couples pledging to have one child could receive monetary bonuses (in some places higher if the child were a girl), preferential treatment for housing, plot and grain allocation, health care, education, and job opportunities, with the precise value of the package varying substantially.

By 1981, 47.3 percent of births were first births, compared to 21 percent in 1970. First-birth percentages by area in 1981 ranged from almost 90 percent in Shanghai to 24 percent in Guizhou. In 1982, 37 percent of eligible couples had accepted the certificate, with provincial rates of acceptance ranging from 10 percent to 75 percent. The "One-Child Certificate Rate" among all married fecund women was 18 percent in 1985.

Couples' renouncement of the one-child pledge varied by province from less than 5 percent to 34 percent; 12.5 percent of holders who had had a girl renounced their pledge, compared to

6.7 percent who had had a boy.

Emphasis has long been placed on improving women's status. A 1950 law sought to prohibit infanticide, concubinage, child betrothal and promoted free and egalitarian marriage. Nevertheless, inequalities persist, and privileges accorded to one-child certificate children, who are more likely to be male, may inadvertently perpetuate inequality. A provision of the 1980 Marriage Law making daughters as well as sons responsible for old age support and the development of handicraft and sideline occupations in rural areas may increase perception of daughters as economic assets.

In one survey, son preference was less pronounced in rural nonfarm villages where women play a key role in small-scale factories. The phenomenon of slight daughter preference has even been noted in some municipalities.

Fertility may have declined, but the family remains a fundamentally important Chinese institution. Although the nuclear family is the dominant form, the three-generation family is still very common. Marriage remains popular and universal. The 1980 Marriage Law in effect relaxed the late marriage strictures of the 1970s, resulting in a marriage boom. Entry into marriage is pervasive: 4 percent are married by ages 15-19, 25 percent by age 20, and 88 percent by age 25.

Fertility is concentrated among women in the 20s, with urban fertility more compressed into a shorter age interval than is the case in rural areas. Breastfeeding durations range from 6 to 20 months with marked socioeconomic differentials.

In late 1982 and early 1983, there were campaigns encouraging abortion, sterilization, and IUD insertion, with the number of sterilizations per year shooting up from 5.1 million in 1982 to 20.8 million in 1983. As of 1983, the mix of contraceptive methods ranged as

follows, 50 percent sterilization, 41 percent IUD, and 9 percent others.

From 1984 to 1985 the proportion of first births declined from 56 percent to 50 percent, with second births, rather than higher order ones, absorbing the increase, accompanying a widening of the conditions under which a couple could have a second child. The state's idea of "desired family size," however, may not jibe with that of the many Chinese who desire a small, but nonetheless more than one-child, family.

Cohorts born during the baby boom period in the 1960s are now in their childbearing period. That generational bulge, combined with a resurgence of early marriage and childbearing, has generated a bulge in births, from 18 million in 1984 to 22 million in 1986 and 25 million in 1987.

In 1986-1988, following a period of relative leniency, family planning policy became somewhat more stringent. Responsibility systems such as "goal management," in which couples together with multiple administrative levels must guarantee compliance with program objectives, are being emphasized. Improvement of grassroots programs has been deemed a priority and later marriage is again being advocated.

Simultaneously, several pilot programs permitting a second child after a substantial delay are being tested. As the TFR creeps up, there is inevitable tension between the desire to meet the population target of around 1.2 billion in 2000 and the pragmatism of achieving what is feasible, given the sociocultural realities of a changing yet still traditional China.

Gwenda Brophy recently completed an internship at PRB. She is currently a consultant at the Futures Group, Washington, D.C.

Part I of this Spotlight appeared in the March 1989 PT.

POPULATION TODAY

Vol. 17, No. 5 May 1989

FEATURES

- 3 Demographers migrate to Baltimore**
A record turnout as PAAers meet, mingle, trade data, and dance the night away
- 4 Global population growth rate nudges higher to 1.8 percent**
Latest PRB World Population Data Sheet shows population grand total of 5.234 billion (as of mid-1989). Italy's fertility is lowest
- 4 The decennial's bicentennial**
On the eve of its 200th anniversary, the U.S. Census readies new technologies and faces new tests of its mettle, according to latest Population Bulletin
- 12 Troubled Sudan has high population growth, political strife**
Ethnic divisions, civil war, refugees undermine the future of this parched African land

DEPARTMENTS

- 2 From the editor's desk**
- 2 Speaking graphically**
- 6 Demographer's page**
- 9 Softwhere**
- 9 Population update**
- 10 Take a number**
- 11 Current readings**
- 12 Spotlight (Sudan)**



PRB

A publication of the Population Reference Bureau, Inc.



"Bromo Seltzer" tower in Baltimore, where PAA met. (See page 3.)

FROM THE EDITOR'S DESK

Notes from the never-ending struggle to communicate demographic research. This year PAA continued the innovative author-meets-critics sessions. In this format, a panel had a chance to discuss and/or dispute a book such as Frank Levy's 1988 *Dollars and Dreams* (reviewed in the July/August 1988 *PT*), and author Levy had the opportunity to respond and update his results. These sessions were lively and cordial, and more than serving as a book critique, facilitated wide-ranging discussion.

Several poster sessions were set up in the exhibition hall. Although an intrinsically more efficient way of conveying research findings to peers at an annual meeting, posters do not yet show signs of eclipsing oral paper presentations.

The usual paucity of handouts

during those paper presentations seemed to continue PAA's J.D. Salinger school of publicity (see "Research, Policy, and the Press" summary on page 7). At seemingly any session with an audience of nine or more, the paper authors would express surprise at the crowd and ask attendees to share one or two handouts per row.

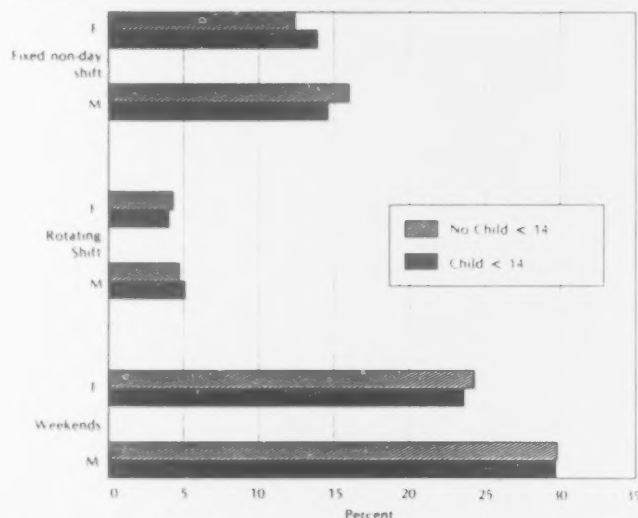
Like all conventions and conclaves, PAA has its roots in 10th-century medieval fairs. Which activity was more important, then? Trading silk or catching up with affairs of the day? Impossible to say, really.

In the 20th century, the dynamic is not all that different. People gather to trade data and catch up with affairs of the day. Which PAA venue is more important, the corridors or the session ballrooms? Impossible to say.

— Art Haupt

SPEAKING GRAPHICALLY

Work and Presence of Children: 1985



The above graph accompanied Harriet B. Presser's 1989 PAA Presidential Address. It shows data for all U.S. males and females employed in nonagricultural occupations according to the presence or absence of children. As the graphs show, whether or not males or females have children has little bearing on their work schedule. For example, nearly one-quarter of working women work on weekends, regardless of whether or not they have children. And women's participation in nonstandard work hours lags only slightly behind those of men. (Data from U.S. Census Bureau, *Current Population Surveys*.)

Source: "Can We Make Time for Children? The Economy, Work Schedules, and Child Care," address by Harriet B. Presser to the annual meeting of the Population Association of America, Baltimore, Md., Mar. 31, 1989.

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Other organizations	200	250

*Educators and students should send supporting documentation

PAAers Gather in Baltimore



It was standing room only at the awards session.

In droves they descended. Overall, some 1,200 participants – an all-time record – landed in downtown Baltimore last month to attend the annual meeting of the Population Association of America.

While gray, sometimes rainy weather glowered outside, the PAA members were inside hearing papers, rubbing professional elbows in the narrow corridors, wolfing down exquisite local cuisine (Baltimore being Crab Cake Heaven), and dancing Friday night away at a blowout that will be talked about for years.

In short, as one street-savvy participant put it, from March 29 to April 1 at the Omni Inner Harbor Hotel there was "a whole lot of demography going down."

Premeetings

APLIC. The Association for Population/Family Planning Libraries and Information Centers – International (APLIC) continues strong into its 22nd year, a year that has been designated as "Outreach 89." To that end, this year's conference as well as the board's activities have focused on increased interaction with and support for its service community.

Earlier, APLIC members role-played

under the guidance of keynote speaker Helen Reich, who aptly illustrated the personal benefit of assertive communication. Broadening the scope, Susan Hill (Librarian at the National Association of Broadcasters) presented techniques and strategies for marketing special libraries and their services. Glenn Wasek (John Snow, Inc.) rounded out the marketing segment with a discussion of the social marketing approach within the international public health sector.

"Reporters are not interested in your statistical nuances"

During the year, APLIC will court funding sources to provide conference travel expenses for three international members, release the updated International Address List of Population and Related Organizations, and seek to expand its visibility. APLIC currently has 120 members, mostly population/family planning libraries, in the U.S. and around the world.

Psychosocial Workshop. The Seventeenth Annual Psychosocial Workshop included the usual thought-provoking presentations of academic and applied research activities exploring the behaviors, motivations, and decision-making processes related to reproductive health.

A session on working with the media in developing countries highlighted the appropriateness and willingness of the Fourth Estate to cover the global effort on behalf of family planning education. Of timely interest was an expert update on abortion politics, including the Surgeon General's unreleased report on the health and psychological effects of abortion on American women, and the likelihood of a reversal in coming months of the landmark 1973 *Roe v. Wade* case legalizing abortion. (Full reversal is considered unlikely, yet states will probably be granted more regulatory discretion, participants suggested.)

Sessions

Ethnic and Racial Differentials. "Assessing the Reproductive Behavior of Two Groups of American Indians" was the title of a presentation of an anthropologically centered paper. *Continued on page 5*

Growth Rate Nudges Up Again

PRB's new *World Population Data Sheet* shows a continuation of the trend toward slightly higher global population growth.

This year, the annual rate shown on the *Data Sheet* is 1.8 percent compared to 1.7 in 1988. The higher rate is also reflected in projections for 2000 and 2020. This year's figure for 2000 is 6.323 billion, 145 million higher than projected last year, while 2020 is 8.330, which is 277 million higher. It now looks as if the sixth billion will be added in 1997—only 10 years on the heels of the fifth.

Much of this increase is a direct result of estimated decreases in death rates in some developing countries with no corresponding decrease in the birth rate, according to Carl Haub and Mary Kent, PRB demographers who prepare the *Data Sheet*. In addition, China and India's birth rates remain at higher levels than had formerly been projected. The new figure for 2000 is, in fact, about the same as the newer and higher projections recently released by the United Nations.

The basics, as of mid-1989: World population is 5,234,000,000 (The 5-billion corner was turned in 1987.) The birth rate is 28 births per 1,000 population, the death rate is 10 deaths per 1,000 population. The world's total fertility rate (TFR) remains the same as in 1988, 3.6 children per woman, on average.

One new twist is the tendency for many low birth rates in developed countries to show some inclination to rise a bit from their very low levels. The United States' TFR is now listed at 1.9 children per woman while Sweden's has also climbed to a heady 1.9. Developed countries which had not yet reached the very low levels of many countries of Northern and Western Europe, are dropping rapidly, however. Italy has snatched the low-fertility crown from West Germany with an astoundingly meager TFR of 1.3. Even sunny Greece and Portugal are below such former archetypes of low fertility such as Sweden.

For the absolute numbers, see "Take

a Number" on page 10 of this *PT* issue.

Data Sheet perusers will once again find that many countries' population size has grown significantly since the last time they looked.

China is now at 1.104 billion (it reached 1 billion back in 1984).

After the gigantic duo of China and India (the latter now at 855 million) comes a quartet of heavyweight countries (the USSR, the U.S., Indonesia, Brazil, whose populations range from 286 million down to 147 million).

After those comes a tier of what might be called light-heavyweights (Japan, Nigeria, Bangladesh, and Pakistan, whose populations range from 123 million to 110 million), followed by

a trio of middleweights (Mexico, Vietnam, and the Philippines, none with a population under 64 million).

These are only 13 countries out of the *Data Sheet's* 175, but taken together, these largest 13 contain about two-thirds of all the people in the world.

—A.H.

PRB members receive their copies of the *World Population Data Sheet 1989* in the same mailing as this issue of *Population Today*. Additional copies of the *Data Sheet* can be ordered from the Population Reference Bureau, Inc., Circulation Dept., P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB. Prices are \$3.00 ea., 2-10 \$2.75 ea., 11-50 \$2.50 ea., over 50, \$2.25 ea. Orders for \$50 or less must be prepaid and include \$1.00 or 5 percent (whichever is greater) for postage and handling.

The Census's First 200 Years

The decennial census has been conducted 20 times in the country's history since 1790 and every one of them has been different—not only because of the rapidly climbing totals and the speedily spreading land area involved, but because of the modernization of enumeration methods and the ever-shifting emphasis on one kind of data or another.

Now the nation's 21st census is barreling down the tracks. Ten years between censuses is a long time, and in that decade the census process and the country have changed just a little more. Many people also tend to forget the details of the census process from one "zero" year to the next.

Just off the presses and in time to remind us is PRB's newest *Bulletin* "Two Hundred Years and Counting: The 1990 Census." Author Bryant Robey takes the reader on a tour of the census as it was in the past, is on the eve of 1990, and may be in the future. He describes the years of preparation for the head count, the new TIGER system, the composition of the questionnaire, and the methodology of Census Day, the postcensus tabulation.

More data products will come out of

1990 than any previous census, both as summary tapes and hard copy. The Bureau, Robey writes, is also considering publishing—as soon as possible after tabulation—a special advanced report prepared from a sample of returns that would provide a broad range of data about the population at national and state levels.

Meanwhile, reapportionment of Congress will be in progress, interest groups will doubtless be disputing totals, as (if the 1980 Census is any indication) legal briefs lob in from localities or groups who fear they are being undercounted vis à vis another group. These issues are all part of the U.S. census process as it has evolved in modern times.

—M.K.

Copies of "Two Hundred Years and Counting: The 1990 Census," by Bryant Robey, the 44-page *Population Bulletin* (Vol. 44, No. 1, April 1989), can be ordered from PRB, Circulation Dept., P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB. Prices are: \$7.00 per single copy, 2-10 copies, \$6.50 each, 11-50 copies, \$5.50 each, 51 or more, \$4.00 each. Orders for \$50.00 or less must be prepaid. For U.S. orders, include \$1.00 or 5 percent (whichever is greater) for postage and handling. For orders mailed outside the U.S., add 25 percent for postage and handling.



Glimpses of PAA Opening an Omni door Harriet Presser Ansley Coale applauded

PAA Bolts to Baltimore

Continued from page 3

by Charles Warren et al (Centers for Disease Control) which compared the reproductive behavior of a group of American Indians living on a reservation in Black Feet, Montana, to that of an American Indian group living off-reservation in nearby Great Falls. In the proximate determinants, the off-reservation American Indians had a lower mean age at marriage, lower contraceptive usage rates, and more unwanted pregnancies than the on-reservation American Indians.

Meeting of the PAA Women's Caucus. The Women's Caucus met during lunch on Thursday to discuss its agenda for the 1990 PAA. The meeting drew approximately 50 women from private, research, academic, foreign, and international institutions.

One item on the agenda was to invite suggestions for possible papers and/or themes suitable for submission to the committee which will select papers for the 1990 PAA. Among the topics suggested were: Women and Aging; Family Planning Service Delivery; Sexually Transmitted Diseases; Graduate Women, Demographic Training and Work; Gender Differences in Job Attainment and in Graduate Training; Family and Work; Violence Against Women; The Demographic Impact of Environmental Disasters/The Effect of Environmental Disasters on Reproductive Health and/or Differential Mortality; Women's Immigration and Its Effects on Labor Force Participation; Female Migration Streams; and Women as Care Givers.

Demographic Aspects of Welfare Use and Homelessness. Kathleen Mullan Harris (Univ. of

Pennsylvania) reported her study following a sample of black mothers for 17 years after their first teenage birth. The results showed that individual characteristics and life events of mothers, such as the attainment of a high school diploma, the presence of a young child, labor force attachment and age were important predictors of gaining employment. Similarly, characteristics and events such as residence in a two-parent household, high school education, employment, and age were important predictors of the transition from welfare to marriage. The study concluded that spells of welfare dependency among black teenage mothers were surprisingly short.

A second study by George Borjas (National Bureau of Economic Research) and Stephen J. Trejo (Univ. of California, Santa Barbara) examined differences in welfare patterns between immigrants and natives. While welfare participation rates increased for both populations between 1970 and 1980, immigrants overall had higher participation rates than natives.

Internal Migration in the United States. All of the papers focused on the characteristics of migrants (or movers) rather than on the redistributive effects of migration on the sending or receiving areas. The discussant to the session noted that these papers presented no new breakthroughs on migration research, but helped to refine our current thinking. Data limitations constrain research on this important topic.

Michael J. White (Urban Institute) and Peter R. Mueser (Univ. of Missouri) presented a trend analysis of determinants of migration. The authors found that increased educational attainment, as well as nondemographic

(secular) changes, accounted for an increasing share of migration.

William A. V. Clark and Kim White (Univ. of California, Los Angeles), looked at migration factors among a sample of elderly renters. The authors concluded that because older persons generally are not in the labor force, income constraints and income interactions were more important determinants of migration for the elderly than for the general population.

Mark C. Berger and Glenn C. Blomquist (Univ. of Kentucky) found that the probability of moving to a given area increased in the presence of higher wages, but decreased with higher housing costs.

Paul R. Voss and Glenn V. Fuguitt (Univ. of Wisconsin) studied impoverished rural areas and found that migration tended to be an inefficient allocator of resources. Younger persons were more likely than older persons to improve their income and living standards by migrating from a depressed area. But in general, the payoff is not great, especially if the move is to another depressed area.

Effects of the Immigration Reform and Control Act of 1986. In this session, Frank Hobbs (U.S. Census Bureau) presented projections on future excess labor force in Mexico, noting that labor force typically grows faster than the total population. About 8-9 million are likely to be added to the labor force by 2000. If the new immigration law (IRCA) succeeds, future unemployment in Mexico would range from 4 to 8 million, but the study also showed that economic growth and improved job creation would have an even greater effect.

J. Edward Taylor (Univ. of California, *Continued on next page*



More glimpses Lapham award winner Albert Hermalin Reynolds Farley and Larry Bumpass Michael Teitelbaum and Jason Finkle.

PAA Bolts to Baltimore

Continued from previous page

Davis) and Thomas Espenshade (Princeton Univ.) gave the results of a study of farm workers in California in which they noted that illegal workers are, surprisingly, not concentrated in the more perishable field crops, but in tree crops. Still, undocumented workers form an important de facto part of the "permanent" farm labor force. They also noted that employers must fill out a "99 form" but do not have to verify legal residence, hence, the chief effect of IRCA is an increase in paperwork. Zai Liang (Univ. of Chicago) noted in his paper that "temporary" workers, or *braceros*, are really not temporary at all and in fact have a high rate of repeat migration. Finally, in the question and answer session, Mike Hoefer (Immigration and Naturalization Service) said that data on border apprehensions have to be a poor indicator of illegal traffic.

Demography of Employment and Underemployment. All four papers in this session analyzed the labor force participation patterns of various racial and ethnic groups. The general conclusion is that minorities tend to face more structural barriers to employment than U.S.-born white workers.

J. Gregory Robinson (U.S. Census Bureau) analyzed labor force participation from a cohort perspective. The author found that the lower participation rates of black males can be attributed to three factors: 1) lower initial levels of labor force participation; 2) lower net entry levels between ages 20-29; and 3) "shocks" in the economy that tend to increase black unemployment and then reverberate forward

into later years of life.

A paper co-authored by Franklin D. Wilson (Univ. of Wisconsin - Madison) and Marta Tienda (Univ. of Chicago) revealed that the probability of finding a job after migrating to a different state or region was not increased for U.S.-born black and Hispanic men. Migration was not necessarily an effective way to improve the likelihood of finding gainful employment.

Valerie K. Oppenheimer (Univ. of California, Los Angeles) found that educational attainment was an important factor in explaining black/white differences in "stop gap" employment (that is, temporary or part-time employment at the beginning of one's work life). Whites were crowding out blacks for entry-level jobs that might otherwise have helped blacks get a foothold in the job market.

Richard P. Verdugo (Tomas Rivera Center) and Naomi Turner Verdugo (U.S. Army Research Institute) concluded that the economic return on one's education depends on the type of job that the individual holds. For example, if an individual is "overeducated" for a particular job, then his/her return on educational investment is low, whereas if he/she is "undereducated" for that same job, then the return is high. The authors' point was that more education doesn't necessarily lead to higher income.

Funding. The main thrust of this session was that funding is available, and that the people in charge of managing applications for funding are to be viewed as resources which can be utilized to help obtain the funding, rather than barriers to success. The panelists - Richard Suzman (National Institute on Aging), Jerald Bailey (AID), Phyllis Moen (National Science Foun-

dation) and Faith Mitchell (Hewlett Foundation) - encouraged applicants to call them to check on progress of applications and to discuss strengths and weaknesses of grant proposals. They suggested that applicants be open concerning other sources to which they have applied, so that the different funding agencies can work together (one fund half and another fund the other half, for instance). The speakers further encouraged unsuccessful applicants to incorporate the discussion of weaknesses into a new application and try again. Some gave listings of present recipients and their projects.

Panel Discussion on Demographic Consulting. Speakers Laurie McCutcheon (McCutcheon Demographic Research) and Donald Pittenger (Demographic Laboratory) led an informative discussion of the benefits and pitfalls of independent demographic consulting, hosted by Market Statistics. The two panelists had different stories to tell, with McCutcheon consulting half-time and Pittenger full-time. Benefits of consulting are independence and choices; pitfalls can be financial uncertainty and lack of support from an organization. The consensus was that any way it's cut, consulting is hard work, not to be attempted unless one is armed with contacts and resources (e.g., computer availability).

AIDS. John E. Anderson (Centers for Disease Control) presented the latest statistics on AIDS cases and demographics. A new survey presented by Freya L. Sonenstein (Brandeis Univ.) and Joseph H. Pleck (Wheaton College) documented a dramatic increase in the use of condoms among 17- to 19-year-old males since 1979. Some 80.6 percent of non-Hispanic black males (15-



The sign that paper presenters fear most. Alumni Night revelers swing and sway

19) have had intercourse, 56.8 percent white non-Hispanic, 59.7 percent Hispanic. The increase in condom use has been accompanied by a decrease in the percent who used no method or an ineffective method. Knowledge of AIDS and the risks of infection is very high, but those at most risk are less likely to use condoms than those in lower-risk groups.

The good news is that low-risk users are being careful, as they should; the bad news is that high-risk groups are not using condoms to the extent they should.

How AIDS impacts employers in terms of the economics of employees with AIDS or at risk of contracting it was studied by David E. Bloom (Columbia Univ.) and Sherry Glied (Harvard Univ.). They found that employers regard the risks as similar to alcoholism or smoking. Those, however, can be more long-term risks while AIDS may strike within a few years after being contracted. A bottom-line policy approach to AIDS has not yet been reached, and many plaintiffs die before court cases can be heard.

The Cohabitation Revolution.

Larry Bumpass and James Sweet (Univ. of Wisconsin) and Andrew Cherlin (Johns Hopkins) reported that, contrary to popular belief, cohabitation between U.S. unmarried men and women is a phenomenon that originated among less educated groups, not the college-educated. There remains a significant inverse relationship between likelihood of cohabitation and education, and this gap is growing, not shrinking.

Research, Policy, and the Press.

This invited-papers session surveyed the relations between Academe and the Fourth Estate.

Douglas Massey (Univ. of Chicago) related his experiences when the press got hold of his studies on U.S. metro segregation patterns. Reporters, he found, seem to dote on release dates, their first, if not only, interest seems to be local, as in, "What's the score for my town?," and they feast on anecdotes, which are, as President Reagan well knew, far more vivid for the public than tables of data. Demographers dealing with the press should arm themselves with appropriate anecdotes – rather than spouting rates, (the results were 5.6, 5.5, and 4.9, respectively), say, "Imagine you're a middle-class black family."

"Reporters are not interested in your statistical nuances," Massey advised the audience.

Richard Munson (Northeast-Midwest Congressional Coalition) pointed out the often underestimated value of good demographer-politician liaisons. Policymakers are "sponges" for good information; if there are any demographic data that have to do with policy areas they're involved with, they want to have them.

From the opposing side of the interface, Allen Otten (*Wall Street Journal*) asserted that "we [journalists] are the avenue" for population data to get to policymakers. Unfortunately, he told his audience: "You can't write English," a problem which makes reading the resulting scholarly articles unnecessarily difficult. From his reporter's point of view, he chided demographers for being "scared" of drawing clear (not to mention journalistically dramatic) conclusions even when the data obviously warrant such conclusions.

"Demogs and reporters should be friends," he said, paraphrasing *Okla-homa!*

No more than 30 PAAers – mostly grizzled veterans of the Demog/Reporter Range Wars – attended this session. During the discussion that followed, the question arose: Why isn't PAA more press-conscious? There is no press room at the annual meeting, and no news releases are churned out before, during, or after the meeting. Nor does PAA aggressively publicize important papers and topics as they come up. Could it be that demographers, like a cohort of reclusive J.D. Salingers, endeavor to avoid publicity, that 20th-century coin of the realm?

(One of the few media "hits" resulting from PAA occurred the following week, when a *Wall Street Journal* column by Otten summarized the results of several PAA papers. But the news was reported as disembodied research results from academic researchers around the country, not as originating from papers read at the most important U.S. demographic conference of them all.)

Economic Consequences of Population Growth.

In a paper on "Demographic Causes and Consequences of the Industrial Revolution," Julian Simon (Univ. of Maryland) argued that population growth sometimes fosters progress and modernization by disrupting a country's economy and population structure. Such disruption can be beneficial; it "cracks the cake" of a static society, so to speak. Examples given were 19th-century England and early 20th-century India.

Trends in Mortality in the USSR and Eastern Europe.

A bleak picture was painted in this session, mainly because mortality trends in these regions have been increasing.

Continued on next page

PAA Bounds to Baltimore

Continued from previous page

not improving, since the 1960s

Richard Carlson (Univ. of South Carolina) and Andras Klinger (Hungary State Statistical Office) reported that Hungarian death rates had risen higher among manual workers than non-manual, and among those in the working ages as opposed to those in the dependent ages. All the causes are increasing, with special emphasis on what were termed "self-destructive behaviors," e.g., alcohol consumption.

Eduardo E. Arriaga (U.S. Census Bureau) reported data that suggest that heavy smoking in the USSR may be more important a cause of mortality trends than alcohol.

During the discussion period, a number of related topics came up concerning the Eastern Bloc. Discussant Godfrey Baldwin (U.S. Census Bureau) noted improvements in Soviet mortality trends in the last two or three years. Data volunteered from the audience included a statistic that 70 to 80 percent of European nurses smoke, and that Hungarian population spends 12 percent of its income on alcohol. From the audience, Murray Feshbach (Georgetown Univ.) reported that there were an estimated 3,000 to 5,000 AIDS cases in the USSR.

Awards and Presidential Address

The Dorothy S. Thomas Award for best graduate student paper on migration or economic-demographic relations was awarded to Andrew R. Morrison (now at Tulane Univ.) for his paper "Measuring the Effects of Internal Migration on Output and Social Welfare: A Case Study of Peru."

If the Thomas Award is the "Rookie of the Year" award, PAA President Harriet Presser reminded the audience, the Irene B. Taeuber Award is PAA's "Hall of Fame." This year it went to Ansley J. Coale, a former PAA President who recently retired from Princeton University. Coale remembered and praised Irene Taeuber.

This year marked the beginning of the Robert J. Lapham Award, presented, as the citation put it, "for distinguished contributions to population research, the application of demo-

graphic knowledge to improve the human condition, and service to the population profession." Lapham served as PAA's secretary-treasurer and was a board member at the time of his death in 1988.

The award was introduced by Lapham's daughter, Susan, with comments by his spouse, Virginia. It was awarded to Albert Hermalin (Univ. of Michigan).

President Presser addressed the assembled PAAers Friday afternoon on the question "Can We Make Time for Children? The Economy, Work Schedules, and Child Care." Contrary to

Hundreds of demographers twisted the night away

popular opinion, over 40 percent of women with children work full-time (that is, over 35 hours a week), not merely part-time. Almost 25 percent of women and 30 percent of men with children under 14 work on weekends, almost identical to the percentages of men and women without children (1985 statistics).

In short, families do not bend their work schedules to the exigencies of childrearing as much as one might expect. Rather, it is childrearing that is suffering. The new realities of women in the workplace are radically changing family life, and families are spending less and less time as a family unit. Allocation of time is the central organizing feature of family life as work becomes more diverse. The responses are likewise diverse, but such heralded solutions as "flexitime" and "flexipace" have so far had slight impact, considering the magnitude of the problem.

Sidebars

Although staffers of the Omni Inner Harbor Hotel were cheerful and tried their best, for many PAAers the hotel left much to be desired.

Check-in on Wednesday evening was The Worst. The Omni front desk was

swamped by an influx of demographers checking in at their annual meeting, an event that should have been totally predictable. An hour's wait to get a room key was not unusual — if "room key" adequately describes the little styrene card that had to be inserted into a slot in the doorknob, then held in firmly while the knob was hopefully twirled.

The rooms were comfortable, if chilly. Bath water cycled between scaldingly hot and bracingly cold, except for the morning when it was nonexistent.

Some meeting rooms were air-conditioned to the max. One accordion room-partition wouldn't close. Stands in the doorway of Liberty B could hear presenters from Liberty A emanating from the P.A. system overhead. The presidential address was delivered in a low, long, overcrowded room, rather than in the dignified "Supreme Tribunal of Demography" ambience seen in some other years.

Much of the Omni experience can be summarized by the cry: "No, no, no, your room's in the South Tower."

On the plus side, the convenience of "express check-out" by phone Saturday averted what could have been another lobby tragedy. And on the very plus side was Friday's Alumni Night Party.

Hotels have come to frown on free-lance room parties, mainly because of the lost chance to sell liquor. Adjusting to this new era, PAA has replaced the usual room fiestas (remember Texas? remember Princeton?) with an "official" universal party.

Last year saw a "Cajun" dance party in a back corridor of the Hyatt Regency in New Orleans. This year's official blowout was, however, far more lively. It was held in the Omni's large, inviting ballroom with a tennis court-sized parquet dance floor in the center. Under the sway of rocking music provided by a local group, Random Access, party-hearty PAAers were soon swarming onto the floor. Hundreds of usually staid demographers twisted the night away, and for most of the music sets more people were on the dance floor than off it — a mark of success for any dance party.

The energy expended cutting a rug that night perhaps led some potential runners to decide they had had enough

exercise for any single 24-hour period. Nevertheless, an even dozen runners showed up in the hotel lobby at 7 a.m. Saturday for the annual Fun Run. Most were swaddled in full top-to-toe color-uncoordinated running outfits. A first for recent years was the appearance of past PAA president Ren Farley, dressed, as befits a Michigan resident, only in shorts and a T-shirt.

The run departed the Omni Hotel promptly at 7:02 a.m. and headed toward the Inner Harbor. With the faster runners leaving the others behind, Federal Hill was climbed, the lovely view of the Inner Harbor was absorbed briefly, bringing back, for some, memories of last year's run when participants paused to watch the mighty Mississippi flowing by. The group then straggled back to the hotel, where Dr. Ren declared that three of the first 12 runners were from Michigan (neglecting to note that three of the last 12 runners were also from Michigan).

How do demographers come by their good humor? It must come from wrestling with all those data. Leila-Kail Garson (Princeton Univ.), who examined statistical evidence for the USSR's fabled (in more ways than one) citizens aged 100 years and up, reported that results from the 1959 Soviet census truly had a category listing "centenarians of unknown age." (This category was thankfully abolished in the 1970 Census.)

Dudley Poston (Cornell Univ.) delivered a paper describing a survey by him and Toni Falbo of only and non-only children in China, in which the researchers found no evidence (based on canvassing teachers and parents) for the existence of the stereotyped spoiled only child. As he finished, Poston mused that given the preliminary nature of the conclusions so far, "continued research — well, I guess this is the end of everyone's paper — is still needed."

In that spirit, PAA convenes in May 1990 in Toronto.

— coverage by Kimberly Crews, Carol DeVita, Denise Dowdell, Judy Felt, Robert Gardner, Carl Haub, Art Haupt (who took the photos), Taynia Mann, Barbara Shane, and Machiko Yanagishita

SOFTWHERE

LOTPAK is a collection of demographic statistical routines designed to be used in Lotus 1-2-3. Developed by Douglas Ewebank, Professor of Demography at the Univ. of Pennsylvania, LOTPAK is divided into two parts. The first part employs indirect estimation techniques, using the *UN Manual X* as a guide. The second part presents two programs that function with life tables. These are **LTPROC**, which constructs a life table using age-specific mortality rates, and **4PARAMLT**, which allows the user to adjust

any observed life table, using four-parameter logit model proposed by Webank, Gomez de Leon, and Stoto.

Since it is a Lotus template, LOTPAK requires that the user already have Lotus 1-2-3. LOTPAK is available as shareware for \$10.00 to cover cost of diskette, diskette copying, documentation, packaging, and postage. Contact: Population Studies Center, Univ. of Pennsylvania, 3718 Locust Walk, Philadelphia, Pa. 19104.

— A.H.

POPULATION UPDATE

Estimated United States Population:

As of January 1, 1989	247,635,000
As of January 1, 1988	245,231,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1036.

Estimated World Population:

As of May 1989	5,218,000,000
Annual growth	93,000,000

Estimated by extrapolation from the mid-1989 population on PRB's *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: December 1988

Item	12 months ending with December					
	Number		Rate			
	1988	1987	1988	1987	1986	1985
Live births	3,913,000	3,829,000	15.9	15.7	15.5	15.7
Deaths	2,171,000	2,127,000	8.8	8.7	8.7	8.7
Natural increase	1,742,000	1,702,000	7.1	7.0	6.8	7.0
Marriages	2,389,000	2,421,000	9.7	9.9	10.0	10.2
Divorces	1,183,000	1,157,000	4.8	4.8	4.8	5.0
Infant deaths	38,700	38,000	9.9	10.0	10.4	10.6
Population base (in millions)			245.8	243.4	241.1	238.3

Note: Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source: *Monthly Vital Statistics Report* (Vol. 37, No. 12) from the National Center for Health Statistics.

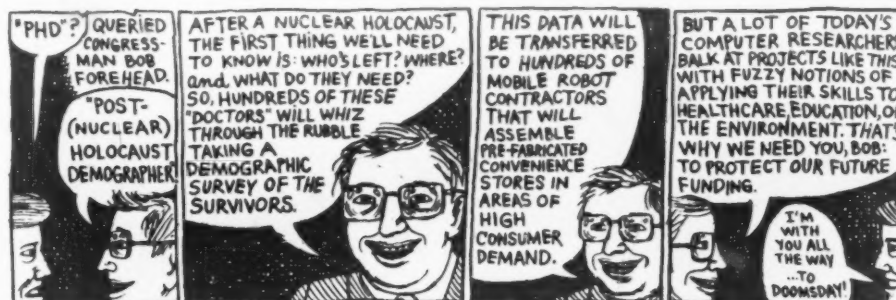
TAKE A NUMBER

The World In Numbers

The following are the absolute numbers from PRB's 1989 World Population Data Sheet.

Country or Region (Country's world pop. rank in parenthesis)	Population mid-1989	Annual births	Annual deaths	Natural Increase	Projected pop. change, 1989-2000	Infant Deaths
World	5,233,824,000	144,105,000	51,029,000	93,076,000	1,088,876,000	10,868,000
More developed	1,206,047,000	18,104,000	11,232,000	6,873,000	61,636,000	276,000
Less developed	4,027,777,000	126,001,000	39,797,000	86,204,000	1,027,240,000	10,592,000
Less developed (less China)	2,923,854,000	103,061,000	32,533,000	70,528,000	839,576,000	9,583,000
Africa	646,389,000	28,787,000	9,942,000	18,844,000	252,075,000	3,243,000
North Africa	141,996,000	5,540,000	1,515,000	4,025,000	45,507,000	513,000
Western Africa	200,107,000	9,380,000	3,535,000	5,845,000	79,898,000	1,167,000
Nigeria (8)	115,316,000	5,328,000	1,983,000	3,344,000	45,614,000	650,000
Eastern Africa	194,439,000	9,332,000	3,373,000	5,959,000	86,421,000	1,104,000
Middle Africa	65,793,000	2,942,000	1,101,000	1,841,000	24,934,000	346,000
Southern Africa	44,054,000	1,593,000	419,000	1,174,000	15,315,000	113,000
Asia	3,060,517,000	85,834,000	27,323,000	58,511,000	682,919,000	6,655,000
Asia (less China)	1,956,594,000	62,895,000	20,060,000	42,835,000	495,255,000	5,646,000
Western Asia	128,844,000	4,697,000	1,060,000	3,637,000	45,497,000	347,000
Southern Asia	1,166,178,000	41,198,000	13,828,000	27,370,000	323,284,000	4,310,000
Bangladesh (9)	114,718,000	4,898,000	1,675,000	3,224,000	38,669,000	676,000
India (2)	835,035,000	27,222,000	9,269,000	17,953,000	207,495,000	2,613,000
Pakistan (10)	110,407,000	4,748,000	1,579,000	3,169,000	34,895,000	570,000
Southeast Asia	444,508,000	13,659,000	3,875,000	9,784,000	104,290,000	928,000
Indonesia (5)	184,583,000	5,371,000	1,717,000	3,655,000	37,462,000	446,000
East Asia	1,320,987,000	26,280,000	8,560,000	17,720,000	209,848,000	1,070,000
China (1)	1,103,923,000	22,940,000	7,264,000	15,676,000	187,664,000	1,009,000
Japan (7)	123,200,000	1,368,000	764,000	604,000	6,820,000	7,000
North America	275,236,000	4,348,000	2,382,000	1,965,000	21,555,000	42,000
United States (4)	248,806,000	3,956,000	2,189,000	1,767,000	19,460,000	39,000
Latin America	437,805,000	12,523,000	3,235,000	9,288,000	97,278,000	690,000
Middle America	114,785,000	3,641,000	737,000	2,904,000	29,496,000	190,000
Caribbean	33,005,000	820,000	257,000	564,000	5,171,000	46,000
Tropical South America	242,134,000	7,016,000	1,864,000	5,151,000	55,816,000	426,000
Brazil (6)	147,393,000	4,171,000	1,164,000	3,007,000	32,094,000	263,000
Temperate South America	47,881,000	1,046,000	377,000	669,000	6,795,000	28,000
Europe	498,677,000	6,362,000	5,078,000	1,284,000	8,186,000	79,000
Northern Europe	84,085,000	1,127,000	922,000	204,000	219,000	9,000
Western Europe	156,977,000	1,896,000	1,598,000	298,000	45,000	15,000
Eastern Europe	113,083,000	1,663,000	1,277,000	386,000	3,465,000	29,000
Southern Europe	144,532,000	1,677,000	1,281,000	396,000	4,457,000	25,000
USSR (3)	285,742,000	5,717,000	2,859,000	2,859,000	22,895,000	145,000
Oceania	26,458,000	535,000	209,000	326,000	3,968,000	14,000

ADDENDA



"Washington" by Mark Alan Stamaty, Washington Post Writers Group, reprinted by permission

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in *Current Readings*. Publishers may address review copies to Book Review Editor, *POPULATION TODAY*, Population Reference Bureau, 777 14th St. N.W., Washington, D.C. 20005.

THE AMERICAN CENSUS: A Social History

by Margo J. Anderson. New Haven, Conn. Yale University Press, 1988. 257 pages. \$30.00. ISBN 0-300-04014-8.

Despite its title, this is no dry, arcane look backward through dusty statistical archives. It is rather an interesting account of how census taking and census results intersect with American politicians and the society they represent.

The creation of the census itself was a political act, to provide every 10 years an accurate and impartial count of the number of residents in each state in order to reapportion seats in the House of Representatives. The census ensures that representative government can continue in the face of population change.

The 1990 Census will mark 200 years of census taking in America. We may think that census controversy is recent, but Anderson shows that virtually every decade has brought heated debate. Politicians and statisticians, it appears, make strange bedfellows.

Though this is a history, Anderson, a professor at the Univ. of Wisconsin—Madison, also discusses the paradox of census taking in recent times. Advances in survey methodologies and computer technologies have dramatically improved the accuracy and value of census data, and these improvements have given the census a growing role in national decision making. But most politicians still think of the Census Bureau "as a lumbering institution that sent legions of enumerators to ask a few questions, add and publish the answers," in Anderson's words.

It is ironic that as statisticians

have achieved a census accuracy that would astonish the Founding Fathers, their reward has been increasing criticism, public demands for even more accuracy, and rounds of lawsuits.

Today's crop of politicians, Anderson notes, knows little about such modern statistical topics as "editing and imputation rules, probability proportionate to size, sampling theory, or FOSDIC. They kept returning to the basic problem they saw with census methods. Minorities and the poor were missed or misclassified in the census. And they attacked the Bureau's high-tech methods for causing the problems in the first place."

Anderson's book provides needed perspective on such issues. For two centuries, Americans have praised the census for the central role it plays in defining and preserving our Democracy. At the same time, we often try to kill the census takers as messengers bearing bad news. One chapter is titled, "The Tribal Twenties Revisited: National Origins, Malapportionment, and Cheating by the Numbers." Another is, "Sectional Crisis and Census Reform in the 1850s." As such titles suggest, America's census statistics have never labored in obscurity. They are often in the political spotlight.

This book is valuable, clearly written, and contains many interesting facts. It should be read not only by national policymakers and the statistical community, but by all who are interested in American society. As Anderson observes, "The census—however taken—is never irrelevant to current social policy debate."

—Bryant Robey

WESTERN EUROPE 1989: A Political and Economic Survey. Published by Europa Publications, Ltd. Detroit: Gale Research, 1988. 545 pages. \$190.00. ISBN 0-946653-47-X.

This new title from England's Europa Publications is essentially a country-by-country survey of Europe. In this respect it is similar to Europa's other quarto-sized surveys of world regions: tables of social, population, and economic data are included, as well as detailed descriptions of government structure and names and mailing addresses of important government institutions. If you want to know how many people emigrated from Sweden to Finland in 1985 (7,064) or how many kilometers of footpaths there are on Gibraltar (6.8), it's here.

In addition, *Western Europe 1989's* pages include maps and lengthy, specialized essays on each country's recent history and economy, and on European trends generally. A comprehensive handbook for people or libraries that have a vital interest in staying current on Western Europe as it heads toward economic unification in 1992.

—Art Haupt

Books Received

ANNUAL REVIEW OF POPULATION LAW (Vol. 12), edited by Reed Boland. New York: UNFPA and Cambridge, Mass.: Harvard Law School Library, 1988. 618 pages.

FOREST FARMERS AND STOCK-HERDERS: Early Agriculture and its Consequences in North-Central Europe, by Peter I. Bogucki. New York: Cambridge University Press, 1988. 247 pages. \$44.50 cloth.

THE ENDS OF THE EARTH: Perspectives on Modern Environmental History, edited by Donal Worster. New York: Cambridge University Press, 1988. 341 pages. \$19.50 cloth, \$12.95 paper.

THE NEW AMERICANS, by Ulli Stelzer. California: New Sage Press, 1988. Unpagged. \$34.95 cloth, \$24.95 paper.

POVERTY, ETHNICITY, AND THE AMERICAN CITY, 1840-1925, by David Ward. New York: Cambridge University Press, 1989. 263 pages. \$19.50 cloth, \$11.95 paper.

STATISTICAL YEARBOOK 1988. Paris, France: UNESCO, 1989.

SPOTLIGHT

SUDAN

Population (1989 est.): 24.5 million
Land area: 967,500 sq. miles
Births per 1,000 pop.: 45
Deaths per 1,000 pop.: 17
Rate of natural increase: 2.8 percent
Total fertility rate: 6.5 children per woman
Infant mortality rate: 113 infant deaths per 1,000 live births
Life expectancy at birth: 49 years
GNP per capita (1987 est.) \$330
Capital: Khartoum

by Wendy Patriquin

Serving as a bridge between the Middle East and sub-Saharan Africa, the Republic of Sudan lies in eastern Africa south of Egypt and west of Ethiopia, its two most prominent neighbors. Sudan is the largest country on the African continent, with more area than Alaska and Texas combined and varied geographical regions, including vast plains in the northeast, mountains in the west, deserts in the north along the Egyptian border, and rain forests in the south. The Nile River is the most important natural resource in Sudan.

Only about 20 percent of the population is currently considered to be residing in an urban area, mostly in the urban complex consisting of Khartoum, Khartoum North, and Omdurman at the junction of the White and Blue Niles. About one-quarter of all Sudanese live in the region between the Blue Nile and White Nile, which accounts for only about 7 percent of the total land area. Should the current growth rate of 2.8 percent per year continue, the population of Sudan could double by about 2010.

From this high rate of growth, one can rightly assume that family planning in Sudan is low. It is estimated that only 4 to 5 percent of married women are using an effective form of contraception.

The country is divided into six north-

FAO photo J. Starby



The Nile is essential to Sudan's population.

ern provinces — where about three-quarters of the population live — and three southern ones, a situation which creates more than a physical boundary. Ethnically, the peoples of the north and south are very different. Culturally and linguistically, the north is closely linked to Egypt and the rest of the Arab world, so the majority of the people are Arabic speaking and Moslem, while the southern region is more closely linked to its sub-Saharan African neighbors, where religious beliefs are either Christian or traditional, and where a multitude of tribal languages are spoken.

The boundary which helps to maintain these differences is the Bahr el-Arab, a tributary of the Bar el-Ghazal, which flows from west to east. There are 3 major tribal groups in the south, the Dinka being the largest (also the largest in the country) numbering over 1 million members.

Differences between north and south help to keep the country economically and politically separate, which in recent years has led to civil war.

Economically, Sudan is primarily agricultural, with cotton and cotton seed accounting for more than 50 percent of export earnings. Sudan also produces up to 80 percent of the world's supply of gum arabic. Its transportation infrastructure is limited to one paved highway between Port

Sudan and Khartoum and a small railroad, a deficiency that undermines both national integration and exports.

Sudan gained its independence from Anglo-Egyptian rule under a provisional constitution in 1956. Between 1956 and 1969, various coalition governments existed and power changed hands several times. A coup in May 1969 put Col. Gaafar Muhammed Nimeiri into power, where he stayed until April 1985. He began a broad Islamization program in 1983, which included the implementation of Islamic law with its provisions for severe punishments, even in the southern provinces. This further alienated the southern population and led to a civil war in the South, as the majority of southerners are not Moslem.

As a result of the Civil War, some 1.5 million refugees have fled from the the South into the Khartoum area, causing mass starvation and an urgent need for food assistance from outside countries.

Elections were held after Nimeiri's ouster, and a new government came into power under Sadiq Al Mahdi who has remained Prime Minister. Recent talks (in early 1989) with rebel leaders in the southern region have proved productive, with the Khartoum government stating that they will suspend Islamic law. To what extent the civil situation will improve, though, only time will tell.

POPULATION TODAY

Vol. 17, No. 6 June 1989

FEATURES

- 3 Foreign aid structure faces new scrutiny**
International Economic Cooperation Act of 1989, currently being considered, would change the goals and means of how population assistance and other aid are provided
- 4 The population view from Capitol Hill**
Current concerns are foreign aid, domestic family planning, Gramm-Rudman, and global warming
- 5 The U.S. housing explosion**
The population may not have mushroomed, but nearly one-quarter of the U.S.'s housing units were built in the last decade
- 5 New data on Uganda show little decline in fertility**
Long-awaited survey finds 6 percent contraceptive use, condoms being distributed to prevent spread of AIDS
- 6 NCHS's provisional and final birth statistics**
How they're tallied, how they compare
- 9 Census Bureau functioning sans director**
Bush Administration weighs Californian for top post, with nine months to go until the 1990 Census
- 12 Namibia's 5.7 persons per square mile**
High fertility but sparse population characterize this southern Africa desert territory

DEPARTMENTS

- 2 From the editor's desk**
- 2 Speaking graphically**
- 5 Survey report (Uganda)**
- 6 Demographer's page**
- 9 Softwhere**
- 9 Population update**
- 10 Take a number**
- 11 Current readings**
- 12 Spotlight (Namibia)**



A country of rocky terrain and 1.8 million people. (See page 12.)



PRB

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FROM THE EDITOR'S DESK

A positive outlook is a wonderful thing. But the 142.2 million tickets sold in the Pennsylvania Super 7 lottery for the epic draw of April 26 indicate that many buyers, overcome by Lotto fever, may have let optimism overwhelm their statistical acumen.

The prize was an amazing \$115 million. But to win, ticket buyers had to pick seven out of 11 numbers ranging between 1 and 80. The odds against this feat are about 10-million-to-1. Statistically speaking, in fact, the chances of an average person picking the right number with one Pennsylvania lottery ticket during a given

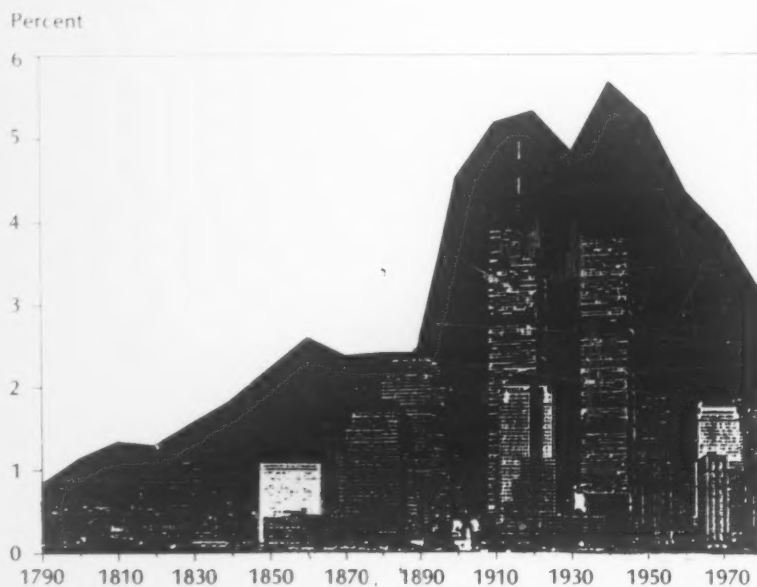
week are only a little greater than that same person's dying in a water-transport accident in that same week.

That is to say, not exactly zero, but pretty remote. (In 1986, there were 1,111 water-transport deaths, and the population of the U.S. was 241,596,000. That works out to a weekly death rate of roughly 0.009 per 100,000 population. Go figure.) Bracketed by these traumatic, though statistically rare, events, for better or for worse 99.99998 percent of the ticket buyers probably found lottery week relatively uneventful.

— Art Haupt

SPEAKING GRAPHICALLY

Americans Who Are New Yorkers



The above graph shows what proportion of the U.S.'s entire population has resided in New York City during the last 200 years. Although the Big Apple has been the U.S.'s most populous city since 1790, when there were only 13 states, its greatest population increases came later, when national urbanization and new waves of immigrants had their greatest impact. The percentage of New Yorkers in the population peaked in the pre-World War II era. Since then, the population size of Gotham's five boroughs has if anything declined, while population growth in other U.S. regions has boomed, in part because sundry Dodgers, Giants et al. have exited the North in search of opportunity elsewhere.

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Foreign Aid Under Review

The way U.S. foreign aid is organized could be radically changed under reforms now being considered in the U.S. House of Representatives. Although a long way from becoming law just yet, the proposed redrafting of the Foreign Assistance Act of 1961 has the potential of jeopardizing the future of U.S. population assistance to other countries — aid that now stands at \$195 million annually.

Such a possible result would, ironically, be inadvertent. The intent of the restructuring was benign. The congressional task force that proposed it made a point of acknowledging the need for such assistance, including the "accelerating" urbanization now in progress in the Third World; which, if unmanaged, "has serious consequences for the global environment, international health, and political stability."

Down to 3/10ths Percent

The very idea of forging a new approach to foreign aid came about from a chance remark by Dante B. Fascell (D-Fla.), chairman of the House Foreign Affairs Committee. "When are we going to do something about the foreign assistance act?" Fascell reportedly asked committee member Rep. Lee Hamilton (R-Ind.). Hamilton mentioned some ideas he had, at which point Fascell promptly asked him to head a task force to work on its reform.

That foreign aid is in need of restructuring is widely acknowledged. The current foreign assistance act written in 1961 now has 33 objectives, 288 reporting requirements, and more than 500 pages of amendments and earmarks. Reporting in February, the Task Force on Foreign Assistance concluded that foreign aid "is vital to promoting U.S. foreign policy and domestic interests, but the program is hamstrung by too many conflicting objectives, legislative conditions, earmarks, and bureaucratic red tape."



Contraceptive advertising in Egypt of an AID-supported population program

Earmarking is the congressional designation of appropriated funds for a specific purpose. Population has consistently been the second largest account in bilateral aid, after agricultural aid.

The report further acknowledges that foreign aid as now constituted "does not enjoy broad public support." Although the American people's willingness to help poor people around the world "remains strong," they do not view foreign aid as doing this effectively. "The public," the report asserts, "have very little concept of the aid program as an instrument of foreign policy."

Both the extent and the form of U.S. foreign aid have changed. Where once foreign assistance stood at about 1 percent of U.S. gross national product (GNP) in the late 1950s, it has now fallen to less than 3/10ths of 1 percent in recent years. In terms of percentage of GNP, the U.S. contributes less foreign aid than its European partners. In terms of absolute totals, Japan's foreign assistance is likely to pass the U.S.'s very soon.

Meanwhile, the share of assistance going to development-related programs (including food and multilateral support) has decreased from nearly 50 percent in the late 1970s to less than 40 percent now.

In the early post-World War II years, foreign assistance was concentrated on the rebuilding of Europe. From the late

1950s to the middle 1970s, Asia was the major recipient. Ever since the Camp David accords of 1979, the Middle East has dominated U.S. regional allocations. In fact, in terms of total aid since 1977, Israel and Egypt have received 47 percent of all bilateral assistance.

No More Earmarks?

The task force recommends that the original Foreign Assistance Act of 1961, 500 pages long, be repealed, and replaced by an "International Economic Cooperation Act of 1989."

Most critical to the population field, the structure of the new act "would avoid most of the conditions, restrictions, directives, and earmarks of the current act."

In recent years, Congress, long supportive of population programs, has appropriated the following population funding in the form of development assistance (these figures exclude funds for research):

Fiscal Year	
1985	\$290.0 million
1986	\$235.3 million
1987	\$267.2 million
1988	\$198.6 million
1989	\$195.3 million
1990	\$201.6 million (requested)

The U.S.'s program of population assistance, which operates in 90 countries. *Continued on next page*

Foreign Aid

Continued from previous page

tries, has heretofore been run as a separate program of the U.S. Agency for International Development, specifically AID's Washington-based Office of Population. Under the new proposal, this office might cease to exist.

Instead, Congress and the Administration would jointly formulate a new coordination structure to set down policy goals for U.S. economic assistance to less developed countries. The details—including the responsibility for carrying them out—would be worked out at AID's field mission level.

Congressional notification would be needed for changes in country levels but not for project changes. Reporting requirements, now massive, would be kept to a minimum. Instead, accountability to Congress and the Executive Branch would be based on achievement of policy goals.

This goal-directed approach to foreign assistance would have four principal aims:

- **Growth:** encouragement of broad based economic growth
- **Environmental sustainability:** improved environmental, natural resource, and agricultural management
- **Poverty alleviation:** "investment in human capacity," which would have many results, including "a more productive economy," "better public health," and a "more stable population," all of which would "promote the interests of the United States."
- **Pluralism:** promotion of political and economic freedom

Some in the population field worry that in the absence of legislation specifically stipulating a population program and its funding, the proposed reform would give too much latitude to AID's regional directors who could effectively kill specific approaches or programs.

For the present and possible future of the International Economic Cooperation Act of 1989, see *Washington Watch*.

(As *PT* went to press, the House Foreign Affairs Committee reinstated population earmarking in the 1989 Act.)

—A.H.

WASHINGTON WATCH



The draft bill of the International Economic Cooperation Act of 1989 was scheduled to be finished in late May with a markup to be held in the House Foreign Affairs Committee soon after. (See page 3 for a description.) While the Committee has heard the concerns of a variety of population groups, the foreign assistance reform proposal it is studying still does not maintain separate funding for international population.

On the Senate side there is still no major reform initiative. The Senate Foreign Relations Committee is working from the existing legislation with slight modifications. Discussion on foreign aid reform this year will probably begin a process that will continue for the next several years.

Several members of the Committee are expected to attempt to restore specific designations for population and health and child survival. Even if these earmarks prevail, the level of funding will be the same as the Administration's request of \$202 million, a \$4 million increase over Fiscal Year 1988.

This amount in an authorization bill could establish a low funding precedent. Appropriations cannot exceed the authorized level.

While work on the form of foreign aid is ongoing, the House Appropriations Subcommittee on Foreign Operations is scrutinizing its funding level. Chairman David Obey (D-Wis.) has announced that given current revenues, the entire foreign aid budget must be cut by about 10 percent. He proposes to cut development programs closer to 14 percent, including population assistance. This would mean population assistance funding for FY 1990 would continue a downward trend from \$198 million to \$170 million.

Meanwhile, interest in population growth has emerged in global warming legislation reintroduced this year by Rep. Claudine Schneider (R-R.I.). Con-

gresswoman Schneider's bill is the first, and one of the most comprehensive, bills on this subject. The bill would establish a National Commission on Population, Resources and the Environment to "advance the scientific understanding of overpopulation."

Domestic Family Planning

On the domestic side, there is movement in the Senate to re-authorize the domestic family planning program, Title X, which covers family planning, has been operating under a continuing resolution ever since the authority for the program expired several years ago. Because of the controversy associated with family planning, Congress has been reluctant to consider a new bill. Since this is still early in the legislative session, there is an interest in examining the program in the Senate Labor and Human Resources Committee.

The 1990 Budget

Negotiations between the executive and legislative branches have ended in agreement on an FY 1990 Budget. The Gramm-Rudman-Hollings deficit target of \$100 billion on FY 1990 has been met by constructing ambiguous assumptions on the economy and potential revenues. The budget sets the framework for spending and for the domestic discretionary programs including population research, international population assistance, and domestic family planning services. For FY 1990 the budget agreement assumes FY 1989 funding with an adjustment for inflation.

—Nancy McConnell

Nancy McConnell is director of the Washington, D.C. office of the Population Resource Center. The Center monitors legislative issues of concern to the Population Association of America. Neither the Center nor the Association advocates any particular population policy but works to protect funding for quality demographic research.

Housing Explosion of the 1980s

The number of housing units in the U.S. grew at a rate of 26 percent between 1975 and 1985, reaching a total of 100 million units.

This means housing was growing twice as fast as population during this period. The striking differential in growth rates (26 percent versus 11 percent) is attributed to a decline in household size and to the rising popularity of seasonal or vacation homes.

There are signs that the growth rate is slowing. The average annual increase of 2.1 million units in the 1970s has declined in the 1980s to 1.7 million.

A recent report by the Census Bureau highlights the state of housing in the U.S. from 1985 to 1986. Not surprisingly, growth of housing units has mirrored demographic and socioeconomic shifts in the population. Since 1940 the North and Midwest have steadily lost ground in their share of the total housing count. In 1945 these two regions contained 59 percent of U.S. housing but in 1985 they shared only 45 percent. In 1985, 35 percent of the nation's total housing units were in the South and 20 percent were in the West.

Housing is divided into two categories, occupied units and vacant units. (According to the Census Bureau, the terms occupied housing unit and household are synonymous.) The nation had 88 million year-round occupied housing units in 1985. Nearly one-quarter of these were built during the preceding 10 years. Another 11.5 million housing units were classified as vacant. This category, which contains more housing units than the entire housing stock of Canada, includes uninhabited units as well as vacation or second homes. There were around 5 million of these seasonably or occasionally inhabited housing units in 1985. Most of what follows below focuses on occupied housing units.

Out of a total of 88 million occupied housing units, 56 million, 63.6 percent, were occupied by owners and 32 million by renters. *Continued on page 8*

SURVEY REPORT

Uganda

National-level vital statistics on Uganda have been scarce for many years. The recently published preliminary report of the Uganda Demographic and Health Survey (UDHS), however, provides some of the first glimpses of fertility data since the 1969 Census on this impoverished Equatorial African country.

Included are some long-awaited data on fertility, family planning, childhood mortality, and maternal and child health indicators in Uganda. Altogether, 4,730 women aged 15-49 were interviewed in 25 of the country's 33 districts. Due to security problems, eight of the northern districts were not sampled.

Fertility in Uganda is high. According to the UDHS, the total fertility rate (TFR) in 1988-1989 stands at 7.3 lifetime children per woman, virtually the same as the TFR of 7.1 estimated from the 1969 census. Similarly, infant mortality remains high, almost 20 percent of the children born to women aged 15-49 were no longer alive at the time of the interview.

Only 6 percent of women are currently using a method of contraception, although almost all women recognize at least one modern method of contraception. Traditional methods continue to be the most widely used methods. Of the 21 percent of women ever having used contraception, 13 percent reported use of periodic abstinence and 6 percent had used the pill. Contraceptive use is higher among urban and educated women. Among current users, 34 percent of women have higher education and 2 percent have no education.

Although millions of condoms have been distributed in Uganda in an effort to reduce the spread of the Acquired Immune Defi-

ciency Syndrome (AIDS) virus, only one-third of the women said they have heard of condoms. Just 1 percent had ever used the method and only one respondent said she was a current user. A survey of Ugandan men could provide a broader picture of condom use in Uganda, however, as women may be reluctant to speak about use.

There appears to be a potential demand for family planning, as 23 percent of married women do not want any more children and 33 percent want to wait at least two years before having another child. Significantly, more than 40 percent of women under age 30 want to postpone the next birth by at least two years.

Diarrhea, a frequent cause of illness and death among children in sub-Saharan Africa, is common in Uganda. Mothers reported that one in five children under the age of 5 had had diarrhea in the two weeks prior to the survey. Only 9 percent of these children were treated with oral rehydration therapy (ORT), an effective and inexpensive remedy. Mothers in Kampala and those with higher education were much more likely to use ORT. It is clear that there is much progress still to be made in decreasing child morbidity and mortality.

The survey asked women about the source of their drinking water. Data are usually lacking on this vital necessity, though it can be a major factor in disease prevalence. Less than a quarter of the women cited a safe source (such as water from water pipe, borehole, protected spring, tanker, or rain). However, almost three-quarters of the women in the urban areas have access to safe water, mainly through piped sources.

— B.S.

DEMOGRAPHER'S PAGE

Compiling Provisional and Final Birth Statistics

by Stephanie J. Ventura
and Robert L. Heuser

Faithful observers of birth statistics produced by the U.S. National Center for Health Statistics (NCHS) are occasionally confused because the Center issues two entirely different data sets—provisional and final

Where They Come From

Monthly provisional data are published about three months after the end of each month. These data are based on the total number of birth certificates filed with each state registrar in a given month-long period, regardless of when the births occurred. The birth certificates received are simply counted for a specific period by each state and reported to NCHS's Division of Vital Statistics. Some births occurring in a previous month or months may be included and others omitted because some local registrars or hospitals may be delayed in submitting birth certificates.

When the provisional figures by state are summed to yield a total for the United States for a given month, adjustments are made. These include estimates for states for which data were not available. (Such estimates are not shown for the individual states in NCHS reports.) An additional adjustment is made for occurrences in California which are reported for either a four-week or five-week period; these data are adjusted for the actual number of days in the month and the adjusted figures are incorporated in the U.S. totals.

The U.S. totals are further adjusted by a factor which takes into account the observed differences between provisional and final monthly figures for the last three years for which both provisional and final data are available.

Final data (the second data set, the one which ultimately has a greater utility) are available about 18 months after the end of the data year. Final data are tabulated by the actual date of birth rather than the date that the birth was registered. Final data are produced by NCHS after all the states have coded and keyed onto data tapes the information reported on all birth certificates occurring in a given year, according to NCHS coding procedures.

In recent years,
U.S. fertility
levels have been
very stable

Other Differences

Characteristics available in the final data include place of delivery, attendant at birth, sex of child, plurality of birth, live-birth order, residence of mother, age, educational attainment, Hispanic origin of both parents, mother's marital status, health information such as prenatal care and number of visits, birth weight, length of gestation, 1- and 5-minute Apgar scores, and interval since mother's last live birth.

Provisional and final data in NCHS publications also differ in the way they are presented. Provisional tabulations are always by place of occurrence of the birth, whereas almost all final tabulations are by place of residence of the mother. Final data tables by residence exclude births to nonresidents of the U.S., which are mostly to residents of Mexico. These births, totaling about 4,000 annually in recent years, are

included in provisional statistics.

The provisional and final statistics derive from clearly different methodologies. Provisional data represent the first look at the data, only three months after the month in question has passed. Final data reflect results of a thorough review of a full 12 months of data.

Studying Trends

Given all of these basic distinctions between the two data sets, how do the numbers compare?

Rather impressively, the provisional and final statistics for a given month or period of months end up being quite similar. For 23 of the 48 months during the years 1983-1986, the difference between provisional and final figures was 2 percent or less. For 41 of the 48 months, the difference was 4 percent or less. On the average, the provisional number was 0.4 percent below the final count for a given month.

Because of the occasionally erratic twists in both the provisional and final monthly data, NCHS encourages data users to look at more than one month of data before assuming that a new trend has developed.

In any case, data for an individual month for a given state should not be used as a basis for assuming a change in the direction of a trend. If it appears that the number of U.S. births has taken a sharp turn up or down in a given month, an analyst should await the data for subsequent months to be assured that the sharp turn was real.

In fact, if data are simply reviewed for a four-month moving average rather than for a single month, a great deal of the variation is removed. During the years 1983-1986, the difference between provisional and final cumulative totals was 2 percent or less in 42 of the 45 four-month periods.

In its monthly report, NCHS tries to smooth out the effect of the monthly variations by using cumulative data. Data are accumulated for January through the month of the report for the

Stephanie J. Ventura and Robert L. Heuser are, respectively, statistician-demographer of, and chief of, the Natality, Marriage, and Divorce Statistics Branch, Div. of Vital Statistics, National Center for Health Statistics

Selected Maternal and Infant Demographic and Health Characteristics, 1986

Characteristics	Hispanic				Non-Hispanic		
	Total ¹	Mexican	Puerto Rican	Cuban	Total ²	White	Black
	Rate per 1,000 women aged 15-44 years						
Fertility rate	93.9	95.5	68.4	55.8	63.3	—	—
	Percent						
Mothers under 20	16.4	17.4	20.9	6.8	12.0	9.5	22.8
4th and higher order births	15.6	18.2	11.7	5.7	9.1	7.6	14.1
Mothers with 12 or more years of education	56.7	41.1	55.2	80.3	80.8	84.5	67.8
Prenatal care beginning in first trimester	60.3	58.9	57.2	81.8	77.1	81.6	60.6
Low birth weight ³	6.1	5.6	9.2	5.5	7.0	5.6	12.7

¹Includes Central and South American and other unknown Hispanic origin which are not shown separately.

²Includes races other than white and black.

³Birth weight of less than 2,500 grams (15 pounds 8 ounces).

Note: Fertility rates are for 11 States for which population data were available.

Source: Division of Vital Statistics, National Center for Health Statistics.

United States and for each state, and for the United States they are also accumulated for the 12-month period ending with the month of the report. Cumulative data tend to reduce the impact of erratic monthly variations and suggest current trends in fertility more accurately. In addition, if NCHS subsequently receives revised counts from any state or states for a given month, figures for previous months are revised, and the revisions are included in the cumulative figures.

Over the last several years, fertility levels have been very stable in this country, with annual changes in the number of births amounting to 1 percent or less in most years. The question that might then be asked is: Do provisional figures for a given year correctly describe the level and direction of fertility for that year? (Correct figures are defined as those derived from final data.) The answer is yes, based on a review of provisional and final birth figures for 1980-1986. The provisional totals for each year were within 1 percent of the final figures.

Additionally, the year-to-year changes in provisional and final data were similar in size and direction, with changes in final data tending to be slightly smaller than those in provisional data. These observations lead us to conclude that so long as the limitations described above are kept in mind, the provisional counts as well as the final detailed data are useful and can be of value to demographers, market researchers, and others.

A Note on Hispanic and Asian Fertility

NCHS first published annual birth statistics for the Hispanic population for the 1978 data year¹ and has published annual summaries of Hispanic fertility for data years 1979-1985. These reports included tabulations and analyses of births by state and Hispanic origin of mother and father, birth and fertility rates by Hispanic origin, and characteristics of Hispanic and non-Hispanic births such as age of mother, live-birth order, educational attainment of mother, marital status of

mother, prenatal care, low birth weight, preterm births, and 1- and 5-minute Apgar scores. (Summary measures used to evaluate the newborn baby's condition at birth).

Beginning with the 1986 data year, the Hispanic fertility data have been included in the Advance Report of Final Natality Statistics², an annual supplement included in the Monthly Vital Statistics Report series. Although the reporting area for Hispanic origin is limited (23 states and the District of Columbia in 1986), it nonetheless includes more than 90 percent of the total U.S. Hispanic population. These data are therefore believed to reflect accurately the trend and level of fertility of the Hispanic population for the entire country.

The Hispanic fertility rate on average has been about 50 percent higher than the rate for the non-Hispanic population, 94 births per 1,000 women aged 15-44 years compared with 63 in 1986, but the levels differ considerably for specific Hispanic groups, as shown in the table. Hispanic mothers in general are more likely to be teenagers, less likely to have completed high school, and less likely to start prenatal care in the first trimester.

Despite all of this, however, they have had relatively low percentages of low-birth-weight babies. The reasons for this apparent anomaly are not understood. The proportion of babies with low birth weight is even lower for births to Hispanic mothers who were born outside the U.S. than for births to U.S.-born mothers³. It has been suggested that nutrition is a particularly high priority among foreign-born pregnant women, but definitive information on this topic is not available. Additionally, data from NCHS's Hispanic Health and Nutrition Examination Survey show that Hispanic women are less likely than non-Hispanic women to smoke.

Births to Asian mothers have increased substantially during the late 1970s and 1980s. Particularly large

Continued on next page

Housing

Continued from page 5

lion (or 36 percent) by renters. In 1930 only 40-50 percent of householders owned their home. This figure increased to 60 percent in the 1960s and peaked at 65.8 in 1982.

For homeowners, increasing sale prices have caused concern about the corresponding increase in property taxes. However, figures show that although the median sales price of new homes rose 115 percent in 1975-1985 and the value of existing homes rose 125 percent, property taxes grew only 55 percent. Corrected for inflation, this means that new home prices and existing home values increased 9 and 14 percent, respectively, and taxes actually fell 21 percent.

The median sales price for new homes was \$84,300 nationally (\$66,300 for existing homes) in 1985. In the Northeast the median new home price reached \$100,000; the figure was \$90,000 in the West. Both regions had a 1975-1985 price increase of 130 percent. For existing homes the West led the regions, with a median of \$94,000 in 1985 (a 1975-1985 increase of 174 percent). The median existing home value in the Northeast was \$80,000, while in the Midwest and South the figure was \$60,000 or less.

About six-tenths of owner-occupied houses were mortgaged. Between 1981 and 1985, homes with paid-up mortgages increased by 2.6 million while the absolute number of owner-occupied mortgaged homes decreased by 1 million. The Census Bureau has been keeping records of mortgage status since 1890 and this is the first time a decline in the number of mortgaged homes has ever been observed.

Economic changes have affected the ability of young couples to become homeowners. In the mid-1970s, three-fourths of all married couples aged 25-34 had already bought their first home. In 1985 fewer than half of these couples could afford to buy a home. Between 1981 and 1986 the percentage of householders who owned their home dropped in every age group below 50 years. The sole group for whom the rate increased was those aged 65 and even for them the rise was only slight. Over 75 percent of those 65 years of

age and over are homeowners.

About 60 percent of all households lived in single-family, detached houses in 1985. Five percent lived in single-family townhouses or duplexes, 6 percent in mobile homes, and the rest in multiple-units such as apartment houses. Among homeowners, however, 94 percent lived in single-family units, whereas only 33 percent of renter-occupied units were single-family.

Almost half (49 percent) of owner-occupied housing units were concentrated in the suburbs, while almost half (47 percent) of the renter-occupied units were in the central city.

Householders in the Midwest and South were more likely to live in non-metropolitan areas and also more likely to live in single-family homes than householders in the Northeast and West. Mobile homes were more prevalent in the South than in other regions.

Most housing units possess the basic amenities of modern life. Only 1 percent of occupied housing units lacked complete plumbing facilities in 1985 and almost 85 percent of households were served by public water system (97 percent of households in urban areas and half of the homes in rural areas). Only three-fourths of U.S. homes, however, were served by a public sewer. The majority of homes offered other desirable housing attributes such as central heat (88 percent of the units), air conditioning (62 percent), and garage (53 percent). Only 28 percent had a fireplace.

The average size of new single-family housing has increased steadily since 1950, with a few downturns during brief recessions in the 1970s and 1980s. Since 1966 the Census Bureau reported that the average size of new houses has increased about 20 percent. The median age for occupied housing units in 1985 was 23 years.

The statistics which involve children emphasize the recent tendency towards smaller families. Over 31 million households included own children under 18 years of age, only 1.6 million more than in 1975. On the other hand, households with no children increased by 14.3 million from 1975 to 1985. For homeowners, units with no children increased by 9.8 million, while those with children actually decreased by about one-half million.

Both blacks and Hispanics spend a higher percentage of their income on housing (over 25 percent vs. 21 percent for all households). They also have lower rates of homeownership (a little over 40 percent vs. 64 percent for all households).

—J.F.

Source: U.S. Bureau of the Census, *Housing in America, 1985-86*. Current Housing Report. Series H-121, Nov-19, March 1989.

Demographer's Page

Continued from previous page

increases have been recorded for births classified as "other Asian or Pacific Islander" (which includes those reported as Asian Indian, Cambodian, Korean, Laotian, Thai, and Vietnamese; by contrast, Chinese, Japanese, Filipino, and Hawaiian births are tabulated individually). Between 1978 and 1986, other Asian births increased from 24,597 to 61,540. Except for Hawaiian mothers, teenage childbearing is relatively uncommon among Asian women.

Very high proportions of Asian mothers are college graduates. Many are women in their thirties and older. The incidence of low birth weight among Asian births is comparable to that for births to white women; the relatively low levels are probably related to the low incidence of teenage childbearing and high educational attainment. An analysis of the characteristics of Asian births has been published⁴ and is updated annually in the Advance Report⁵.

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New Census Director?

Four months have passed and President Bush has still to name a new director for the Census Bureau. In itself, the delay is not particularly unusual — new administrations typically take many months to fill their top slots, and the Reagan Administration did not nominate a permanent census director until July 13 of its first year. Nevertheless, census watchers are concerned about the Bureau because its most important operation, the decennial census, now looms just nine months off.

In the meantime, the Bureau is being headed on an acting basis by deputy director C. Louis Kincannon. The previous director, John G. Keane, left in January 1989 to take an academic position.

In April 1989 the *Los Angeles Times* reported that Alan Heslop — who heads the Rose Institute, a nonprofit California think tank studying demographic and electoral trends — was considered the front-runner to be appointed census director.

Heslop also teaches government at Claremont McKenna College and is active in California Republican politics. The report that he was being considered for the post brought statements of support from a number of Republican politicians, who voiced admiration of Heslop's work. It also brought protest from state Democratic politicians, who voiced fears that Heslop's political background might lead to politicization of the census, i.e., lack of concern about undercounting of minorities in the census. In terms of reapportionment, undercounting of minority populations is thought by some to favor Republican congressional districts more than Democratic ones. Undercounting would also change the amounts of federal funding disbursed in certain areas.

Heslop, who has acknowledged his interest in the director position, insists that he is committed to ensuring an accurate count.

Whomever the President nominates for the Census Bureau must be confirmed by the Senate.

— A.H.

SOFTWARE

Popsim is a demographic forecasting program for IBM-compatible PCs enabling users to perform population projections by sex in five-year age intervals, and make 100-year projections in terms of population, energy consumption, and GNP growth based on user-supplied assumptions about growth rates, migration rates, energy use rates, and per capita GNP and GNP growth rates.

The program was written by Laurence L. Falk and Carol J. Falk.

Popshow: Introduction to Demography is a teaching program offering graphic illustrations and explanations of demographic concepts such as life ta-

bles, demographic transition, and changes in population size and composition.

Written by George E. Immerwahr, Popshow requires 256K memory and a color monitor and adaptor.

The above programs are each available for \$25.00 from the National Collegiate Software Clearinghouse, Duke University Press, 6697 College Station, Durham, N.C. 27708. The Clearinghouse distributes by mail varied social-science and humanities-oriented PC software authored by faculty at several dozen universities.

— A.H.

POPULATION UPDATE

Estimated United States Population:

As of March 1, 1989	247,968,000
As of March 1, 1988	245,554,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1038.

Estimated World Population:

As of July 1989	5,234,000,000
Annual growth	93,000,000

From the mid-1988 population on PRB's 1989 *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: December 1988

Item	12 months ending with December					
	Number		Rate			
	1988	1987	1988	1987	1986	1985
Live births	3,919,000	3,827,000	15.9	15.7	15.5	15.7
Deaths	2,168,000	2,133,000	8.8	8.8	8.7	8.7
Natural increase	1,751,000	1,694,000	7.1	6.9	6.8	7.0
Marriages	2,392,000	2,409,000	9.7	9.9	9.9	10.2
Divorces	1,189,000	1,158,000	4.8	4.8	4.8	5.0
Infant deaths	38,600	38,000	9.9	10.0	10.4	10.6
Population base (in millions)			245.8	243.5	241.1	238.5

Note: Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source: *Monthly Vital Statistics Report* (Vol. 38, No. 1) from the National Center for Health Statistics.

TAKE A NUMBER

A Maturing Transition?: Birth rate speculation is a favorite pastime of population watchers over and above its vital importance to the results of population projections. The steep decline in the developed countries' birth rates has been well documented. Everyone "knows" that Sweden has the lowest fertility and that West Germany's population is on the wane. The only problem is that Sweden's rate is now in the top tier of fertility rates in Northern and Western Europe, and West Germany's population continues to grow due to immigration.

Projecting trends from recently reported rates is risky business, but here is what is happening. Fertility levels in countries where birth rates have been the "lowest of the low" appear to have bottomed out. The fact that fertility in many developed countries has plateaued at low levels has been noted in this space before, but now there are clear signs of the beginnings of a rise.

West Germany, which must be the world record holder for lowest fertility with a total fertility rate (TFR) of 1.28 lifetime births per woman in 1985, now has a TFR approaching 1.5. Sweden's TFR has risen for the past five years to an estimated 1.9, within an eyelash of rounding to 2.0! Other countries showing a similar ascending trend from very low rates are Denmark and Norway. Not all countries reach extremely low levels before showing some sign of a resurgence. The United States' TFR has climbed back to a (provisional) 1.9 for 1988, up from 1.7 in 1976. And while not exactly showing a rise, the low fertility rates of some countries have at least leveled out and established a record of relatively stable rates: Belgium, Austria, France, and the Netherlands are examples.

In Eastern and Southern

Europe, meanwhile, the transition to very low fertility appears to be in full swing. Italy currently records the world's lowest TFR at 1.3, and if preliminary measures prove correct, Southern European TFRs may be dropping as low as 1.5 in Greece, Portugal, and Spain.

Too much, of course, should not be made of short-term swings in birth rates. The trends described above almost certainly result from some delayed child-

bearing in the late 1970s and early 1980s occurring now. Nonetheless, some feel there is a certain plausibility to the idea that developed-country fertility is in the process of "seeking its own level"—and that that level may be higher than the past decade's dips would have suggested. At any rate, should Sweden's TFR actually cross the 2.0 mark, that would, demographically speaking, be "big news."

—C.H.

ADDENDA

INTERVIEWERS

U.S. CENSUS BUREAU ENUMERATORS

\$6.00 PER HOUR
22½ CENTS PER MILE CAR ALLOWANCE

Precanvass field workers needed. This is a temporary position lasting approximately 6 to 9 weeks. The precavass enumerators are responsible for verifying addresses within the urban area of Washington, D.C. and conducting brief interviews when necessary. The enumerator then spots these houses on a map.

To qualify you must:

- *BE AT LEAST 18 YEARS OLD OR 16 YEARS OLD AND*
- *MEET EMPLOYMENT CONDITIONS SET BY STATE AND LOCAL LAWS*
- *QUALIFY BY PASSING A WRITTEN 30 MINUTE TEST*
- *IN MOST CASES APPLICANTS WILL NEED AN AUTOMOBILE IN*
- *GOOD WORKING ORDER*
- *AND A VALID DRIVERS LICENSE*

Qualified applicants should apply as soon as possible by visiting the following location for testing:

LPO OFFICE
1336 H St. N.W.
Washington, DC

Thursday, April 6
10:00am, 12:00pm or 2:00pm

MARTIN LUTHER KING CENTER
1326 Florida Ave. N.E.
Washington, DC

Thursday, April 6
10:00am, 12:00pm or 2:00pm

WASHINGTON HIGHLAND LIBRARY
115 Atlantic St. & So. Capitol Terr.
Washington, D.C.

Thursday, April 3
10:00am, 12:00pm or 2:00pm

This classified ad for precavass field workers, which appeared in the *Washington Post*, is a harbinger of 1990 Census positions to come. Local government employment offices or newspapers should have news this summer about hiring for the real crunch ahead. From October 1989 to September 1990 the Census Bureau will be hiring half a million temporary people overall, of whom 300,000 will be enumerators.

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

DEVELOPMENT DATA BOOK and TEACHING GUIDE

(revised editions), by the World Bank (Contact World Bank Publications Dept., 1818 H St. N.W., #12203, Washington, D.C. 20433, 1988.) Classroom set (includes 11 copies *Development Data Book* and 1 copy *Teaching Guide*): \$9.95. Single copies of the *Development Data Book* only: \$4.95. (Prices vary outside of the United States.)

The *Development Data Book* is a 20-page guide to international social and economic statistics. The first section of the book combines colorful maps and charts with text highlighting the following indicators: life expectancy, school enrollment, population growth, GNP per capita, and merchandise exports. The second section is a data table with 12 additional indicators for 129 countries and six regions.

The accompanying *Teaching Guide* includes learning activities which help students study social and economic conditions in developing countries. Students may perform a variety of tasks including statistical applications, map and data analysis, problem solving, and decision making.

The *Teaching Guide* has 40 pages of activities. Answers and other information for teachers are printed in blue and will not photocopy. The activities include exercises to familiarize students with the indicators being used, review pages, activities for advanced students, discussion questions, values analysis, research topics, debate topics, and a test. World and regional maps are also included.

—Kimberly Crews

THE OTHER PATH, by Hernando de Soto. New York: Harper & Row, 1989. 271 pages. \$22.95.

The informal urban sector is traditionally pictured as chaotic and menacingly outside the law—"marginated" "informals" "squat" in "villas miserias," "pirate" electricity, and "hustle" for a living as "black marketeers" in an "underground economy."

Hernando de Soto, a Peruvian economist, paints quite a different picture in his celebrated book, *El Otro Sendero*, now available in English as *The Other Path*. Armed with data compiled by researchers at Peru's Instituto Libertad y Democracia (ILD), de Soto compellingly demonstrates that Lima's informal sector is astonishingly productive and well organized.

In Peru, de Soto contends, "48 percent of the economically active population and 61.2 percent of work hours are devoted to informal activities which contribute 38.9 percent of the gross domestic product (GDP) recorded in the national accounts."

Nearly half of Lima's population lives in "informal" housing, or homes that the poor usually had to build for themselves on land that they had to claim by hook or by crook. For example, in 1985, ILD data demonstrate that the legal system only accounted for 31 percent of the new houses built in the capital.

Similarly, the informal system runs 91 percent of Lima's transport vehicles. An estimated 439,000 *limeños* depend on informal street and market trade for their living. The average vendor's income, ILD found, was an impressive 38 percent above the minimum wage.

Migration from the countryside was the watershed of the vibrant informal sector. During 1940-1981, Peru's urban population, now centered in Lima, increased from 2.4 to 11.6 million. The newcomers, however, were unable to penetrate

the formal system. ILD researchers found, for instance, that it would take a poor *limeño* 289 days and \$1,231 to legally register a small factory.

As the establishment was slow formally to absorb the job seekers and their aspirations, the outsiders perforce created their own economic, political, justice, and value systems. De Soto observes that "people are capable of violating a system which does not accept them, not so that they can live in anarchy but that so they can build a different system which respects a minimum of essential rights."

De Soto contends that Peruvian laws are used by elites to compete for economic power: "There appears to be a tradition among our country's lawmakers of using the law to redistribute wealth rather than to help create it. From this standpoint, the law is essentially a mechanism for sharing a fixed stock of wealth among the different interest groups that demand it." The author finds great similarities between contemporary Peru and mercantilist European states before the industrial revolution.

De Soto's advocacy of a free marketplace and the right of private ownership make *The Other Path* fashionable at the moment. But the book's enduring contribution is the detailed examination of Lima's complex and effective informal sector. The description of the poor people's ingenuity in the face of an unfair system is truly fascinating.

The Other Path is a well-written book that is well translated. It is very important, if for no other reason than that it has been a revelation for a great many important people. Mario Vargas Llosa, the Peruvian novelist who contributed the foreword, is now a candidate for Peru's presidency, running largely on the ideas engendered by the book.

—Win Carty

SPOTLIGHT

Namibia

Population (mid-1989): 1.8 million
Land area: 318,252 sq. miles
Births per 1,000 pop: 44
Deaths per 1,000 pop: 13
Rate of natural increase: 3.1 percent
Total fertility rate: 6.1 children per woman
Infant mortality rate: 111 infant deaths per 1,000 live births
Life expectancy: 55 years
GNP per capita (1986 est.): n.a.
Capital: Windhoek

by Gwenda Brophy

Following decades of dispute regarding its future, Namibia in South West Africa began its transition to independence on April 1, 1989. Formerly a German protectorate, an era which ended during the First World War when South Africa assumed control, this huge territory, four times the size of the United Kingdom, is bordered to the north by Angola and Zambia, by Botswana to the east, the Republic of South Africa in the south, and some 850 miles of Atlantic shoreline on the west.

The Namib desert covers approximately 15 percent of the total area while the Kalahari desert stretches over large part of the north and east.

Namibia has one of the lowest national population densities in the world, 5.7 persons per square mile. The rural population is growing at approximately 3 percent per year, a rate the land cannot support, promoting a great deal of internal migration (especially among the young) to the towns, exacerbating existing pres-

sure on housing, educational and health facilities.

The land has abundant mineral resources, with the world's richest diamond fields and largest uranium mine contributing half of the nation's wealth. However, in terms of employment, agriculture has the greatest impact of all sectors of the economy, with about 75 percent of people directly or indirectly dependent on it. Two-thirds of all Namibians depend on subsistence farming. Commercial farming is primarily based on livestock. There is still little manufacturing.

Ethnically, 75.4 percent of the population are black, 11.3 percent white, 10.3 colored, and 3 percent Bushmen. The Ovambo group makes up half of the population. There are approximately 80,000 whites in the country.

As yet Namibia has no family planning policy per se. Provision of family planning is made through the broader health care service in clinics, at "visiting points" served by mobile services in both urban and rural areas, and in hospitals in urban areas. Prevalence is much higher in urban areas and among women with more education.

Educated women use a wider variety of methods—pills, injectables, IUDs, and condoms. Women with little or no education appear to favor injectables, a method also preferred by teenage girls, who reportedly prefer not to be seen carrying around the pill.

Awareness of the role of condoms in preventing sexually transmitted diseases is present among younger men who favor this method more than do older males. Other proximate determinants of fertility also have influence—urban women

breastfeed an average of six months in contrast to the two-year average among rural women.

In addition, the related practice of postpartum sexual taboos is observed more stringently in rural areas and by women with less education.

The degree of "unmet need" for family planning is difficult to establish. However, fertility outside marriage is common, and many women are reaching parities which are deleterious for maternal and child health. Achieving the goals of IEC (information, education, and communication) presents a major challenge.

Unlike most other African countries, Namibia begins independence with a well-developed physical, administrative, and financial infrastructure and a strong communications network.

Only about 25 percent of the total population live in the capital, Windhoek, and other towns at present (75 percent of the white population, 18 percent of the black) but this will increase to two-fifths by the end of the century. About three-quarters of the population aged 6-16 (encompassing women about to enter the childbearing years) attend school. Expansion of tourism will increase opportunities in the service sector, substantially but not exclusively for women.

Namibia borders Botswana, one of the two black African countries where prevalence of modern contraceptives is highest. Like Botswana, its wealth is mineral-based. Whether it will begin to mirror Botswana demographically remains to be seen.

Gwenda Brophy is currently a consultant at the Futures Group, Washington, DC.

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POPULATION TODAY

Vol. 17, No. 7/8 July/August 1989

FEATURES

- 3 "Red Island in a blue sea"**
Madagascar coping with deforestation,
population pressure
- 4 Norplant nears U.S. approval**
Hard to predict impact of five-year contraceptive
implant when it reaches the marketplace
- 5 Zimbabwe's family planning success story**
Availability and women's contraceptive knowledge
high in this Eastern African country
- 6 How Hispanics are faring**
Signs of assimilation vie with minority isolation; income
has increased with duration of U.S. residence
- 8 PRB aims at the '21st century'**
New series will brief policymakers on population-related
issues
- 8 The opposing sides in China**
A look at the numbers
- 8 The U.S. Statistical Abstract rides again**
The governmental equivalent of the World Almanac
- 9 Incredible graying Japan**
By 2025 one-quarter of its population may be over 65,
according to new PRB *Bulletin*; government concerned
- 12 Texas's bumpy population trail**
In-migration has been followed by out-migration
in the 1980s

DEPARTMENTS

- 2 From the editor's desk**
- 2 Speaking graphically**
- 5 Survey report (Zimbabwe)**
- 6 Demographer's page**
- 9 Softwhere**
- 9 Population update**
- 10 Take a number**
- 11 Current readings**
- 12 Spotlight (Texas)**



Japan Information and Culture Center

Will an aging Japan bustle less? (See page 9.)



PRB

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FROM THE EDITOR'S DESK

It is mankind's manifest destiny to colonize this galaxy.
— President Reagan,
September 22, 1988

Is it? Now there's a nice, hot-weather question to while away this summer's "dog days." Even a Hudson Institute researcher once posited scenarios of people living off the Earth that ranged anywhere from 16,000 population by A.D. 2150 to a mind-boggling 4.5 billion.

But urgent scientific or "colonial" reasons aside, there is surely no pressing population reason to ship human beings en masse into the firmament. By many projections, earthly population growth is liable to fall from

the present 255,000 per day to something closer to zero per day sometime around 2150.

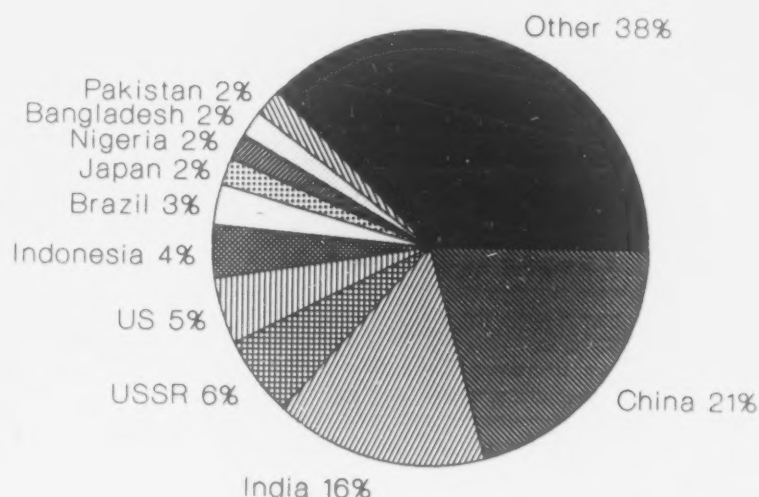
By that time humanity is expected to level off at perhaps 11 billion. Whether the world can or cannot sustain that many people on a practical, prosperous basis remains to be seen, though we shall all hope so. Coping with a world population that size is a challenge which will have to be met and overcome long before large-scale extraterrestrial emigration is likely to become a feasible proposition.

In short, our earthly problems will have to be solved right here on Earth. So what else is new?

— Art Haupt

SPEAKING GRAPHICALLY

The World's Top 10, plus "Other"



The pie chart above represents the population of the world, with slices for the 10 most populous countries. As can be seen, over half the world's population lives in the five most populous countries, while some five-eighths of all humanity lives in the Top 10.

The remainder — 38 percent of all the people on earth — are shoehorned into what the chart blithely labels "Other," i.e., the remaining 200-odd countries and dependencies. That modest three-eighths slice is all the more amazing when one realizes that it includes, among other places, all of the Western Hemisphere (except for the United States and Brazil), plus all of Africa (except for Nigeria), Southeast Asia (except for Indonesia), and every country of Europe.

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'A Gray Land in a Red Ocean'?

Madagascar, an island nation of 11.6 million people, is located in the Indian Ocean 250 miles east of Mozambique. A little smaller than Texas, it calls itself "the red island in the blue sea." Red refers not to the government – Marxist though it is – but to the fertile soil that once made Madagascar not only the world's largest per capita consumer of rice but also a major exporter.

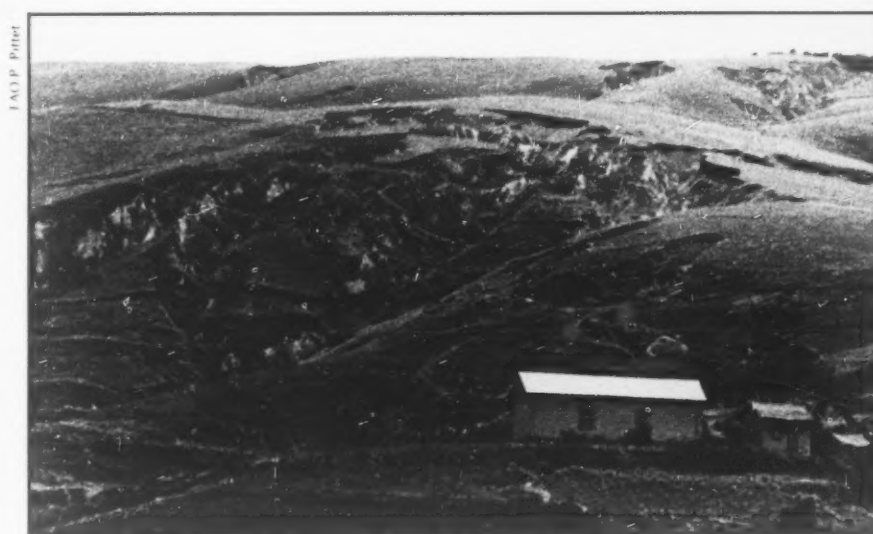
Unfortunately, the country is on the way to becoming a gray land in a red ocean. Population pressure, deforestation, and the decay of the island's irrigation system are leading to erosion which has already washed many tons of rich, red earth out to sea, leaving nothing but bare rock behind.

Madagascar's population, with a crude birth rate of 46 births per 1,000 population and a crude death rate of 15 deaths per 1,000 population, is growing very rapidly. At the current rate of 3.1 percent per year, it could double in the next 22 years. The total fertility rate (TFR) is estimated to be 6.6 children per woman. Infant mortality is very high – 110 deaths per 1,000 live births – and life expectancy at birth only 53 years.

Land is not the only thing eroding in Madagascar. The country's economy has declined steadily since 1970; the current per capita income of \$200 per year is less than half of what it was then. Agricultural production, the mainstay of the economy, has not kept up with population growth and in 1986, 106,000 metric tons of rice had to be imported.

The loss of Madagascar's forests is also a tragedy for the world. Unique biological treasures are being lost. Because of its geographic isolation – the island broke away from the coast of Africa 160 million years ago – plants and animals evolved along paths different from the rest of Africa. The most notable examples are the seven species of baobab trees, two-thirds of the world's chameleon species, and the 40-odd varieties of lemurs, monkey-like prosimians which depend on Madagascar's vanishing forests.

Starting in the mid-1980s, the government has initiated a series of policy reforms aimed at tapping the country's



One challenge facing Madagascar: Farmland is being washed away.

considerable economic promise and getting it back on the road to sustainable development. In addition, Madagascar has caught the attention of the world's environmentalists and aid donors.

Population Policy Development

Among the major initiatives is the development of a national population policy. As recently as the 1984 Population Conference in Mexico City, the government's position was that population growth per se was not a problem and that economic development would restore any imbalance between population growth and the economy.

Given the continuing economic crisis, the government has since modified its position. Beginning with a national population and development conference in 1987, the government of Madagascar, with financial help from UNFPA and several USAID contractors (including PRB's IMPACT Project), has been conducting research about population/development linkages and preparing a draft population policy document based on the research findings. By August of this year, if all goes according to schedule, an official policy will have been signed by President Didier Ratsiraka and voted into

law by the Parliament.

The population policy is being prepared as a background document for the next five-year plan, which will begin in 1991. Its basic goal rests in "the amelioration of the quality of life of the [Madagascan] people by the realization of an equilibrium between population growth and economic growth." The policy covers fertility, mortality, and migration, particularly rural exodus and regional disparities, and offers sectoral recommendations. Specific demographic targets and implementation strategies will be developed later.

Three government agencies have been important actors in the policy development process: (a) the Population and Development Unit of the Planning Directorate in the Office of the Presidency, (b) the Ministry of Population, Social Condition, Youth and Sports and (c) the Parliamentary Committee, for Population and Development.

The Population Unit is the technical side which carried out 13 sectoral studies for presentation to an inter-ministerial technical committee. The studies, and resulting committee recommendations, form the substantive base for the population policy. On the political side, the Ministry of Popu-

Continued on next page

'A Gray Land'?

Continued from previous page

lation has the mandate to develop the final policy document, present it to the government and implement the policy once it has been signed. The Parliamentarians have played a key awareness-raising role, informing other members of Parliament and their constituents about the importance of population growth for development. The Parliamentarians are also planning to introduce legislation to overturn a 1920s French law still on the books which prohibits the distribution of contraceptives. Private sector organizations have also participated, primarily Madagascar's IPPF (International Planned Parenthood Federation) affiliate, Fianakaviana Sambatra (FISA), which means Happy Family in Malagash. FISA has conducted a series of population seminars for members of the press and religious leaders.

Madagascar is not unique in Africa because of its population policy. As many as 30 countries throughout the continent are currently at some stage of policy development. However, the way Madagascar has chosen to go about the process does have some unique features. First, the policy is based strictly on up-to-date research, conducted for the purpose of the policy. Second, all branches of government are included in the policy development process through the inter-ministerial technical committee. Third, the committee's recommendations were circulated throughout the country with evaluation questionnaires so that local leaders could be informed and feel part of the process. Fourth, the private sector has been an invited and willing participant.

Madagascar's biggest population policy challenge is yet to come—implementing the policy. The health care system is weak and the government does not yet deliver any family planning services. Only FISA and one or two other private health care organizations have family planning clinics. Contraceptive prevalence is estimated to be as low as 3 percent. In addition, the government of President Ratsiraka is currently being challenged. He won a presidential election held on March 28, 1989, but his victory is being dis-

puted in the streets. Riots in mid-April left several people dead and dozens wounded. The political situation is not likely to calm down until after the Parliamentary elections scheduled for May 28. Nonetheless, the technical

staff in the government are committed to the policy process and believe that having a successful population policy is essential for Madagascar's development.

— N.Y.

Norplant Implant Now a Step Closer to U.S. Use

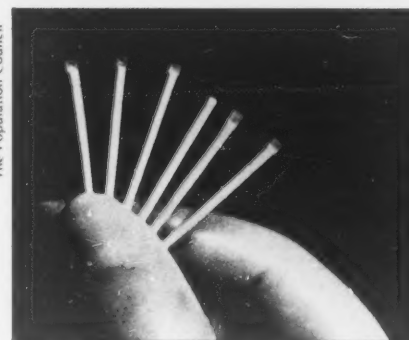
Already in regular use in 12 countries, the Norplant contraceptive implant may become available in the U.S. within a year.

The innovative birth-control method cleared a major hurdle April 27, 1989, when an advisory committee of the Food and Drug Administration (FDA) recommended the agency approve it for sale. This recommendation sets the stage for a final and favorable FDA decision permitting Norplant distribution, expected within a few months.

Developed by the nonprofit Population Council, Norplant consists of six silicone-rubber rods inserted beneath the skin of a woman's arm in a minor surgical procedure. The rods, each about the size of a matchstick (34 mm long and 2.4 mm wide), contain low levels of a synthetic progestin, which is gradually released into the bloodstream. The rods are designed to remain in place and effectively protect a woman from pregnancy for up to five years, at which time they are removed in a similar surgical procedure. The contraceptive may be removed, and fertility restored, at any time. A 4-mm-long incision is made in the skin for insertion and removal; a local anesthetic is required for both procedures.

The progestin employed in Norplant is the same as that used in combined oral contraceptives. One of its significant features is that it delivers the progestin directly into the bloodstream by diffusing it continuously in low doses directly through the walls of the enclosing plastic rod. This automatic method requires no action on the part of the user.

Except for improved barrier methods such as contraceptive sponges and cervical caps, the 1980s have not seen any improvements or additions in the U.S.



Six rods = five years

contraceptive arsenal. Approval for injectable contraceptives remains a long way off, and "morning-after" pills have met political as well as development barriers. Spurred by fears of litigation, the pharmaceutical industry has cut back on contraceptive research, and withdrawn all intrauterine device (IUD) brands but one from market (The sole remaining IUD manufacturer requires users to sign a 20-page waiver form.)

The perfect contraceptive (i.e., perfectly safe, effective, convenient, long-lasting, inexpensive, and reversible) is still far from realization. All contraceptives thus far developed fall short of this ideal, and Norplant is no exception. The device decreases in effectiveness for women weighing more than 150 pounds. Its side effects include those of oral contraceptives, and bleeding irregularities such as prolonged menses and spotting between periods. About 20-25 percent of women using Norplant in tests discontinued use because of irregular menstrual bleeding. Given both its delivery advantages and its side effects, how popular it will become is hard to assess, and will be an issue of interest in the coming year.

— A.H.

SURVEY REPORT

Zimbabwe

Contraceptive prevalence in Zimbabwe is one of the highest in all of sub-Saharan Africa. According to preliminary results from the 1988 Zimbabwe Demographic and Health Survey (ZDHS), 43 percent of married women are currently using a method of contraception. Of these, 36 percent are using modern methods and 7 percent use traditional methods.

This continues the trend noted in previous surveys of increasing use of contraception, with a greater proportion of women opting to use modern methods over traditional methods.

Recognition is also high, 96 percent of all women have heard of at least one method of contraception. This represents an increase of 9 percent from the 1984 Zimbabwe Reproductive Health Survey (ZRHS). The pill is most widely recognized (94 percent), followed by the condom (77 percent), withdrawal (63 percent), injection (62 percent), and IUD (52 percent). Despite knowledge of several methods, 72 percent of married women practicing contraception are using the pill. Withdrawal is the second most prevalent method, accounting for 12 percent of current use among married women.

5.7 Children

Most women who have heard of a method stated that they knew where to obtain it. The majority of supply method users (pill, condom, diaphragm) obtain their method through government hospitals or clinics, or through the Zimbabwe National Family Planning Council clinics or community-based distribution program. Women using clinic methods (IUD, sterilization, injection) primarily receive services from government facilities. However, only about one in five

women recognized or knew a source for offering a diaphragm or for male sterilization.

Contraceptive prevalence increases as women's educational attainment levels increase. In Zimbabwe, more than half of current users of contraception have attended at least some secondary school. It is not surprising that the increase in use of contraception has been concurrent with recent gains in the education of women. The ZDHS found that over 28 percent of women aged 40-49 had no education, whereas only 2 percent of those aged 15-19 had never gone to school.

At current fertility rates, women in Zimbabwe will have 5.7 children by the end of their reproductive lives. This total fertility rate represents a decline from the 1984 TFR of 6.5 found by the ZRHS. However, further analysis of fertility trends await the final ZDHS report.

Few married women want to have a child in the next two years. Thirty-three percent of married women want no more children and 35 percent want to wait at least two years before having a child. In determining the unmet need for family planning, the ZDHS found that among married women not using contraception, 31 percent want no more children, and an additional 30 percent want to delay the next birth by at least two years. Thus, despite the relatively high level of current contraceptive use, one in three married women (if currently exposed to the risk of pregnancy) may be in need of family planning to achieve desired fertility. Although some women may be able to achieve the birth spacing they desire through breastfeeding, data on this practice await the final ZDHS report.

Medical attention during preg-

nancy and at the time of delivery is very common in Zimbabwe. For over 90 percent of recent births, mothers received some prenatal care from trained personnel. Similarly, 7 out of 10 recent births were attended by a doctor, trained nurse, or midwife.

Health and AIDS

Vaccination coverage of children under age 5 is high. Among children with health cards verified by the interviewer, more than 90 percent were immunized against the six major childhood diseases. Although one in six children under 5 years of age had experienced diarrhea during the two weeks prior to the survey, 70 percent had been treated with a sugar-salt-water solution, an inexpensive, effective treatment for diarrhea. Few children showed signs of poor current nutritional status, partly attributable to good agricultural harvests in 1987-1988.

The ZDHS assessed women's knowledge of the Acquired Immune Deficiency Syndrome (AIDS) as an indicator of how well current efforts in AIDS education are succeeding. While 86 percent of women have heard of AIDS, and two-thirds of these women were able to identify multiple sexual partners and sex with a person with AIDS as routes of transmission, misconceptions are also common. Nineteen percent of the respondents thought that the virus could be transmitted through casual contact or by breathing the same air as a person with AIDS. Although there has been a 26-percent increase since the 1984 ZRHS in the percent of married women recognizing condoms, only 17 percent report ever having used a condom and only 1 percent are current users.

— B.S.

DEMOGRAPHER'S PAGE

Hispanic Americans in the 1980s: Mainstream or Minority?

by William P. O'Hare

This Demographer's Page summarizes the findings of a new PRB Staff Working Paper, "Assimilation and Socioeconomic Advancement of Hispanics in the U.S." Information on how to order the Paper from PRB appears at the end of the article.

The image of America as a melting pot of different races and ethnic groups is a national icon. The successful assimilation of many past immigrant groups is a source of great pride. Most Americans probably hold to a belief that our system allows immigrants and ethnic minorities to move easily into the cultural mainstream. But the current Hispanic immigration wave should force us to take a new look at the American assimilation process.

Although the assimilation of many Europeans who arrived in this country in the 1800s and early in this century is virtually complete, that of Hispanics—today's fastest growing minority group—is uncertain (between 1980 and 1988, the Hispanic population in the U.S. increased from 14.6 to 19.4 million).

Immigrants to Minority

The concept of assimilation (and its synonyms *acculturation*, *integration*, and *adaptation*), means different things to different people. Throughout this article we use the term to reflect socioeconomic parity. This use of the term does not address the extent to which immigrants and minorities adopt

the behavior and psychological norms of the major culture. However, it does lend itself to statistical analyses using a variety of social and economic indicators.

The traditional immigration-adaptation models are of questionable utility where the Hispanic population is concerned. Earlier European immigrants already shared many cultural traits with the dominant native-born Anglo population. Further, the U.S. economic base and occupational structure have changed rather dramatically in the past two decades. These two factors may have a strong impact on immigrant mobility.

In many respects Hispanics may be

In 1988, Hispanic family income was 63 percent that of whites

regarded more as a minority group than as recent immigrants. Even though recent immigration from Latin America is a prominent source of Hispanic population growth in the U.S., many U.S. Hispanics were here before the Anglo settlers arrived on this continent.

Any study of Hispanics should attempt to differentiate between the various subgroups in the Hispanic population: those of Mexican origin, who currently make up 62 percent of the total; the Puerto Rican group (13 percent); those of Central or South American ancestry (12 percent); and those with Cuban roots (5 percent). Many people in these subgroups view the term "Hispanic" as an artificial or inexact designation forced upon them by outsiders. Furthermore, census data may be affected by differing interpretations and responses to potentially confusing questions.

With the proliferation of special education for Spanish speakers and a desire by some Hispanics to retain their cultural identity, one may question the degree to which Hispanics desire assimilation. A recent poll by *Hispanic Business* magazine indicates, however, that 80 percent of Hispanics desire greater assimilation into U.S. culture. Hence, if data suggest that Hispanics are poorly assimilated, it is unlikely that this is due to a lack of Hispanic interest.

How They Fare

The remainder of this article examines the status of Hispanic Americans according to several key indicators.

Income. The traditional model of immigrant assimilation suggests that U.S.-born Hispanics would have higher socioeconomic status characteristics than Hispanic immigrants to the U.S., and earlier immigrants, higher than later ones. Data from the 1980 Census show that in 1979 the median family income of pre-1960 immigrants was \$17,013 (in constant 1979 dollars), whereas for those families arriving after 1975 it was \$11,010, indicating that income has indeed increased with duration of residence. U.S.-born median family income was higher than foreign-born for most subgroups. However, in 1988, Hispanic family income was 63 percent that of whites, and while white family income grew by 1 percent in the previous 10 years (after adjusting for inflation), it fell by 8.5 percent for Hispanics. Per capita income for Hispanics has remained steady since 1973 at around 60 percent that of whites.

The overall evidence shows that family and individual income has increased with duration of U.S. residence, indicating a degree of assimilation. Though Hispanic median family income in 1988 was 12 percent higher than that of blacks, since 1979 it has fallen at a faster rate than blacks despite the fact that many Hispanics reside in the economically expanding

states of Florida and California. It should be noted, however, that the large influx of recent immigrants, most of whom are young, is a factor in the declining family incomes of Hispanics.

Poverty and Welfare. In line with the income data, the poverty rate for Hispanics was 2.7 times that of non-Hispanic whites in 1987, and while it was not as high as the black poverty rate, the Hispanic rate increased more than the rates for whites or blacks in the 1980s. In 1980, poverty rates were lower among Hispanics who had been in the U.S. longer.

The absolute numbers of Hispanics receiving benefits from each of the five major welfare programs has risen dramatically in the 1980s, but the rate of welfare use changed little. The rate of use among poor Hispanics is higher than that of poor whites, but lower than that of poor blacks. This may mean that poor Hispanics are less likely than poor blacks to become trapped in the web of poverty and welfare dependency that characterizes a portion of the black population living in "underclass" neighborhoods.

It is impossible to draw any broad conclusions regarding welfare use because it is likely that the impact of low income and poverty is mitigated by other factors in determining Hispanic use of the welfare system.

Education. The percent of Hispanics who have four years or more of high school increased from 44 percent to 51 percent between 1980 and 1988, whereas the median school years completed increased from 10.8 to 12.0 in the same period. The rising level of education suggests that Hispanics are becoming more assimilated, though there are predictable variations across subgroups, with Mexicans and Puerto Ricans generally lagging behind other groups in educational attainment.

Occupation and Labor Force Participation. The labor force participation rate of Hispanic males stayed even at about 80 percent in the 1980s while that of Hispanic females increased

slightly from 48 to 52 percent. Among the Hispanic subgroups, Puerto Ricans had the lowest rate of participation, 68.6 percent for males and 40.9 percent for females in 1988, perhaps due to their concentration in the economically declining New York City area. In 1980, the labor force participation rates were higher for immigrants than for U.S.-born Hispanics, some of whom have reached retirement age.

One can be a part of the labor force and still be without work. Unemployment for Hispanics increased during the economic recession between 1980 and 1982, but the Hispanic male unemployment rate fell from 16.3 percent in 1983 to 9.5 percent in 1988. The rate

Fertility rates for Hispanic women are consistently higher

for females fell still more rapidly during the same period.

In the 1980s, Hispanics experienced a small but steady increase in the percentage employed in white-collar occupations, from 35 to 40 percent. Cubans are the most highly represented in white-collar professions (59 percent), followed by Puerto Ricans (46 percent) and Mexicans (35 percent). Whether a person was foreign- or native-born has a substantial impact on his or her likelihood of having a white-collar job, the former being much more highly represented in that category.

Homeownership. For most American families, equity in a home is by far their most significant financial asset. Homeownership also provides a measure of social status and links one to a community in a special way. In 1986, Hispanics were less likely than blacks or whites to be homeowners. About 67 percent of housing units occupied by

whites in 1986 were owned, compared with 45 percent of units for blacks and 41 percent for Hispanics.

As with other indicators of socioeconomic status, Cubans enjoy the highest rate of homeownership, though they are still well below the comparable values for non-Hispanic whites.

Other Indicators of Assimilation. Besides the economic measures mentioned above, indicators such as fluency in English, intermarriage, and patterns of residence and fertility levels help us to assess degrees of assimilation.

In 1980, 6 percent of Hispanics said they spoke no English and 37 percent said they did not speak English very well. Not surprisingly, the percentage of Hispanics who speak no English is lower among native-born than among foreign-born Hispanics. Ability to speak English is related to income, as only 12 percent of English speakers versus 34 percent of those who cannot speak English are below the poverty line.

Though the rate of intermarriage among Hispanics is several times that of blacks, intermarriages still account for only one-sixth of all Hispanic marriages. The absolute numbers have increased by 26 percent between 1981 and 1987, reflecting significant growth in the Hispanic population.

As with other indicators, Hispanics trail far behind whites in the process of suburbanization, but are more advanced than blacks in this process. In 1980, Hispanics lived in less segregated neighborhoods than blacks, but over the 1970-1980 decade, blacks experienced a greater decline in the degree of residential segregation than did Hispanics.

Lastly, fertility rates among Hispanic women are consistently higher than those of non-Hispanic white women for all age groups. The total fertility rate (average lifetime births per woman) for foreign-born Hispanics in 1980 was 2.9, which is slightly more than 1 child greater than the rate of 1.8 for non-Hispanic whites.

Continued on next page

PRB's '21st Century' Project

In a number of ways, the 21st century has already arrived—at least in demographic terms. The U.S. labor force of the next century is already born (although not all in the United States); next century's first high school graduating class (as well as its dropouts) are already in grade school; and the elderly of the 21st century are well down paths that will determine their financial and health care needs for old age. Gaining a better understanding of the demographic trends that will affect the future will be one of the key components of public policymaking in the 1990s.

In order to assist elected officials and policymakers in understanding the implications of demographic change, the Population Reference Bureau (PRB) and Population Resource Center (PRC) have joined together in a new project, "America in the 21st Century." PRB will produce a series of seven briefing booklets that cover a broad array of public policy issues and questions, while PRC will conduct a series of briefings on these topics for leadership groups throughout the country. The

project is supported through a grant from the Ford Foundation.

The first report in this new series, entitled *A Demographic Overview*, was officially released on June 9. It provides a brief summary of important demographic trends (for example, the aging of America, changing family and household patterns, changing race and ethnic composition, migration to the Sunbelt and to the suburbs, the distribution of income and wealth, etc.) and relates these changes to important public policy considerations. The remaining booklets in the series will be issued over the next nine months and will address the following policy areas:

- **Human Resource Development** focuses on education, work force needs, and retirement issues;

- **Social and Economic Support Systems** discusses the needs of the poor and other at-risk population groups, such as children, the disabled, and the elderly;

- **Infrastructure Needs** looks at prospects and problems related to the built environment (i.e., roads, airports, telecommunications, housing);

- **Environmental Concerns** focuses on issues of land use, air and water quality, and waste disposal;

- **Governance and Politics** looks at voters, political realignments, and managing the public sector;

- **U.S. in a Changing World Economy** examines issues of competitiveness and changing global markets.

The complete series of PRB's "America in the 21st Century" reports will be available in early 1990. In the meantime, copies of the *Overview* booklet can be ordered from PRB. PRB members receive a 20-percent discount on these items.

—C.J.D.

Write PRB, Circulation Dept. P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB. Prices to the public are \$5.00 ea.; 2-10 copies \$4.50 ea.; 11-50 copies, \$4.00 ea.; 51 copies or more, \$3.80 ea. Prices to PRB members are \$4.00 ea.; 2-10 copies, \$3.60 ea.; 11-50 copies, \$3.20 ea.; 51 copies or more, \$3.00 ea. Orders of \$50 or less must be prepaid and include \$1.00 or 5 percent (whichever is greater) for postage and handling.

China's Population

As background to the momentous events still unfolding in China, the size of the populations involved should be considered. As of mid-1989, China's total population was 1.104 billion. China's university-student population was 1.7 million, as of 1985, according to the 1986 *China Statistical Yearbook*.

By way of comparison, 370.7 million are collective and individual workers in rural areas, with another 128.1 million staff and workers in state-owned units elsewhere. About 3.2 million men are in the People's Liberation Army.

New Statistical Abstract Out

The federal government's answer to the *World Almanac*, the *Statistical Abstract of the United States* has been published by the U.S. Dept. of Commerce every year since 1878.

The Abstract is comprised of the most recent U.S. statistical data from public and private institutions. The latest, 1989, edition, hot off the presses, is a 2-inch-thick compendium of 1450 tables and charts.

Perhaps you'd like to know the number of Japanese tourists visiting the U.S. in 1987 as compared with 1986 (2.1 and 1.7 million, respectively)? Or military contracts awarded in 1987 (\$158.8 billion)? If you have a hankering for more obscure facts, the Abstract is happy to oblige. For instance, of the 48,792,000 American smokers in 1985 (down 4.7 million from 1983), 27 percent smoke more than 25 cigarettes a day.

For information junkies, the Abstract is an invaluable reference that doubles as a guide to other statistical publications and resources. Each table cites its source, and many contain data not previously published.

—A. deS.

The 1989 *Statistical Abstract* is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or from GPO bookstores in major cities. Prices: \$26.00 paper, \$32.00 clothbound.

Demographer's Page

Continued from previous page

Conclusion

The evidence for the assimilation of Hispanics into the mainstream American population is not entirely conclusive. Economic data suggest that Hispanics are falling behind the rest of the population in some important respects, notably income and poverty levels. However, it is important to keep in mind the degree to which the data are influenced by recent streams of migration from the economically less developed countries of Central and South America.

Copies of the 74-page Staff Working Paper "Assimilation and Socioeconomic Advancement of Hispanics in the U.S." by William P. O'Hare can be ordered from PRB, Circulation Dept., P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB. Price postpaid is \$5.00 ea.

Japan Graying At Rapid Pace

Japan, one of the world's greatest economic powers, is aging faster than any other developed country, according to PRB's new *Population Bulletin*, "The Graying of Japan," by Linda G. Martin.

In 1985 only 10 percent of the population was 65 and over, but by 2025 nearly one-quarter is expected to be over 65, making Japan one of the most "elderly" national populations on earth.

This aged age structure is the projected result of a low total fertility rate (1.7 lifetime births per woman) and to the world's highest national life expectancy (78 years).

With their high life expectancy, the Japanese potentially face long periods of retirement, as well as the possibility of long periods of disability. Although family support of the elderly is traditionally strong, the recent decline in co-residence with children is one indication that the way support is given may be changing. This issue is of particular concern to the government, which wants to avoid taking any greater responsibility for the elderly than is necessary.

The government is encouraging employers to provide more elderly employment opportunities at the same time it is trying to raise the eligibility age for receipt of public pensions.

Because of social changes, it is the government, not the family, that may be compelled to take a more active role in the care of the elderly. Just the same, Martin's findings suggest it is unlikely that population aging will lead to some catastrophic economic decline. Restructuring of the economy and continued overseas investment are likely to keep Japan's economy growing in the long run.

—A.H.

Copies of "The Graying of Japan," by Linda Martin, the 44-page *Population Bulletin* (Vol. 44, No. 2, July 1989), can be ordered from PRB, Circulation Dept., PO Box 96152, Washington, DC 20090-6152, with checks payable to PRB. Prices are: \$7.90 per single copy; 2-10 copies, \$6.50 ea.; 11-50 copies, \$5.50 ea.; 51 or more, \$4.00 ea. Orders of \$50.00 or less must be prepaid. For U.S. orders, include \$1.00 or 5 percent (whichever is greater) for postage and handling. For orders mailed outside the U.S., add 25 percent for postage and handling.

SOFTWHERE

Electromap World Atlas is a recently released software package that allows the user to combine graphics with text. The result is a menu-driven atlas, almanac, and factbook in one package.

Electromap contains 238 full-color, detailed, country, regional, topographic, and statistical maps. Each country is mapped individually as well as within its region and the world. A set of data accompanies each country map. This data is selected from a drop-down menu and appears in outline format in a window over the map. Forty-five topics are covered, including geography, people, government, economy, and communications. There are 14 statistical maps including the fol-

lowing: infant mortality, life expectancy, population density, and population growth.

The diskette version of Electromap requires a PC with 640K RAM, hard disk (the entire program takes up about 5.5 million bytes), and EGA or VGA card and color monitor. The CD-ROM version also requires 640K RAM, CD-ROM drive, MS-DOS 3.1 or later, and EGA or VGA card with color monitor; a mouse is optional.

Electromap can be purchased for \$129.00 from: Electromap, Inc., P.O. Box 1153, Fayetteville, Ark. 72702-1153. Orders only (800) 336-6644. Questions can be directed to Richard Smith or Greg Mitchell (501) 442-2309.

—K.C.

POPULATION UPDATE

Estimated United States Population:

As of April 1, 1989	248,163,000
As of April 1, 1989	245,728,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1038.

Estimated World Population:

As of July 1989	5,234,000,000
Annual growth	93,000,000

From the mid-1989 population on PRB's 1989 *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: January 1989

Item	12 months ending with January					
	Number		Rate			
	1989	1988	1989	1988	1987	1986
Live births	3,919,000	3,827,000	15.9	15.7	15.5	15.7
Deaths	2,168,000	2,133,000	8.8	8.8	8.7	8.7
Natural increase	1,751,000	1,694,000	7.1	6.9	6.8	7.0
Marriages	2,392,000	2,409,000	9.7	9.9	9.9	10.2
Divorces	1,189,000	1,158,000	4.8	4.8	4.8	5.0
Infant deaths	38,600	38,000	9.9	10.0	10.4	10.6
Population base (in millions)			245.8	243.5	241.1	238.5

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source: *Monthly Vital Statistics Report* (Vol. 38, No. 1) from the National Center for Health Statistics.

TAKE A NUMBER

The Big N.M. The Census Bureau has released some updated figures on "megapolises," those giant groupings of populations that often go under such monikers as "Bos-Wash." These giant clumpings of population centers are composed of "commuting clusters." The urban buildup from Boston to Washington, also known as the Northeastern Megalopolis, had a population of 42.5 million in 1987, says the Census Bureau, about one in six Americans. Within the N.M., the four major commuting clusters were New York-Philadelphia (27.8 million), Boston-Providence (6.2), Washington-Baltimore (6.1), and Harrisburg-York (1.0). As you can see, a megapolis covers a lot of real estate. For a while there, the notion of the megapolis seemed to be losing favor since many felt that linking Boston and Baltimore as though they were across town from each other was a bit odd. Perhaps Amtrak's popularization of the "Northeast Corridor" has helped give the concept a bit of a rebirth.

And so Forth Alert perusers may have noticed the new disk-shaped emblem (see below) which began adorning Census Bureau publications late in 1988. It's the Census '90 logo, developed within the Bureau, and it will appear on any Census publication remotely connected with the decennial

CENSUS '90



census. The circular whirl represents the census as a continuous process, while the two profiles represent the bureau's dual perspective—toward the past and the future—and its mission to be "always centered on people."

— C.H.

The Population Clock

		WORLD	MORE DEVELOPED COUNTRIES	LESS DEVELOPED COUNTRIES
Mid-1989 Population		5,233,824,000	1,206,047,000	4,027,777,000
Births per	Year	144,104,937	18,104,325	126,000,612
	Month	12,008,745	1,508,694	10,500,051
	Week	2,763,649	347,205	2,416,443
	Day	394,808	49,601	345,207
	Hour	16,450	2,067	14,384
	Minute	274	34	240
	Second	4.6	0.6	4.0
Deaths per	Year	51,028,787	11,231,794	39,796,993
	Month	4,252,399	935,983	3,316,416
	Week	978,632	215,404	763,228
	Day	139,805	30,772	109,033
	Hour	5,825	1,282	4,543
	Minute	97	21	76
	Second	1.6	0.4	1.3
Natural increase	Year	93,076,150	6,872,531	86,203,619
	Month	7,756,346	572,711	7,183,635
	Week	1,785,017	131,802	1,653,216
	Day	255,003	18,829	236,174
	Hour	10,625	785	9,841
	Minute	177	13	164
	Second	3.0	0.2	2.7
Infant deaths	Year	10,867,681	275,597	10,592,084
	Month	905,640	22,966	882,674
	Week	208,421	5,285	203,135
	Day	29,774	755	29,019
	Hour	1,241	31	1,209
	Minute	21	1	20
	Second	0.34	0.01	0.34

Source: Calculated from the 1989 World Population Data Sheet

ADDENDA



THE STAT FAMILY

Drawing by M. Stevens, ©1989 The New Yorker Magazine, Inc.

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in *Current Readings*. Publishers may address review copies to Book Review Editor, *POPULATION TODAY*, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

FROM MANY STRANDS: Ethnic and Racial Groups in Contemporary America

by Stanley Lieberson and Mary Waters. New York: Russell Sage Foundation, 1988. \$29.95 hard-bound. ISBN 0-87154-543-8.

This is one in a series of monographs commissioned by the National Committee for Research on the 1980 Census. The book examines how well ethnic/racial ancestry explains outcomes on several key socioeconomic and demographic measures. While the book concerns itself with the white, "European" subgroups defined by the 1980 Census (which in 1980 accounted for 83 percent of the total population) it also describes some of the striking differences that appear when these groups are compared with the nonwhite, non-European population.

The analysis of ethnic ancestry relies on the ancestry question which appeared for the first time on the 1980 Census. The trend had been for the census to place decreasing value on information increasing white ethnic groups. Many of the problems attendant on a first study of a first-time survey question are attenuated by comparisons and evaluations of the census ancestry responses with results from the 1979 Current Population Survey and the National Opinion Research Corporation yearly General Social Survey.

Each of these sources relies on slightly different questions on ancestry, or on slightly different formulations of the same question. The book also relies in places on a more limited set of historical data giving the status

of immigrants closer to the time they arrived.

The authors find that on most of the socioeconomic and demographic measures considered — spatial distribution, fertility, nuptiality, educational attainment, occupation and intermarriage — the major white ethnic groups tend to become less distinguishable over time. The authors are able to discern these longitudinal trends in part by observing differences between age cohorts that cannot be attributed to life cycle changes and by observing differences between ethnic groups who immigrated at different historical points.

While discrepancies in socioeconomic indices for these white ethnic groups do diminish with time, by pointing out where and to what extent differences do exist, the book portrays how ethnic identification remains an organizing social facet of contemporary American life. Differences between white ethnic groups are most strongly manifested in the spatial distribution of the population. A central theoretical concern of the book is the extent to which ethnic groups assimilate over time (melting pot) versus the extent to which they remain culturally distinct (pluralism). The authors point out that ancestry is not a stationary concept and that over the course of a lifespan, and as educational and marital status change, there exists a fair amount of fluctuation in the way ethnicity is conceived. Lieberson and Waters suggest that this fluctuation in ethnic-group definition is key to any theory of assimilation.

The authors note further that the proportion of respondents who list themselves as simply "white" despite an abundance of alternative choices of specific European ancestries and mixes of ancestries the census provides,

are not distributed throughout the population with respect to several of the variables considered in the same manner as all whites. Lieberson and Waters suggest that these respondents may form a distinctive ethnic grouping.

This monograph deals with several interesting issues: Over which socioeconomic and demographic variables does white ethnic ancestry have predictive value? How do generational or immigration cycles work to reinforce or diminish differences in socioeconomic characteristics that are correlated with ethnic ancestry? Are respondents less likely to be aware of ethnic identity over time? Are there patterns in the history of white ethnic groups in America that can be generalized to newer, culturally distinct immigrants in this country?

— *Taynia Mann*

Books Received

CHOOSING A CONTRACEPTIVE: Method Choice in Asia and the United States, edited by Rodolfo Bulatao, James A. Palmore, and Sandra E. Ward. Boulder, Colo.: Westview Press, 1989.

THE 1851 CENSUS: A Guide to the National Sample of the Enumerators' Returns, by Michael Anderson (On microfiche). Cambridge, England, and Alexandria, Va.: Chadwyck-Healey, 1988. 145 microfiche provide household census data for a 2-percent sample of the 1851 British census. \$750.00.

ECONOMICS IN URBAN CONSERVATION, by Nathaniel Lichfield. New York: Cambridge Univ. Press, 1989. \$54.50.

ISLANDS, ISLANDERS, AND THE WORLD: The Colonial and Post-colonial Experience of Eastern Fiji, by T.P. Bayliss-Smith, Richard Bedford, Harold Brookfield, and Marc Latham. New York: Cambridge Univ. Press, 1989. \$42.50.

RESOURCES, POPULATION, AND THE PHILIPPINES' FUTURE, by Gareth Porter with Delfin J. Ganapin, Jr. (WRI Paper #4). Washington, D.C.: World Resources Institute, 1989. 68 pages.

WORKING WOMEN: Past, Present, Future. Washington, D.C.: Bureau of National Affairs, 1989.

WorldAIDS magazine, No. 1 [magazine specializing in AIDS news], published by Panos Institute, Alexandria, Va. 12 pages.

SPOTLIGHT

TEXAS

Population (1988 est.): 16,841,000
Land area: 266,017 sq. miles
Births per 1,000 pop. (1987 est.): 17.8
Deaths per 1,000 pop. (1987 est.): 7.1
Infant mortality rate (1988 est.): 9.1
Persons per sq. mile (1985): 64.1
Population aged 65+ (1988): 9.9 percent of total population
Population aged 5-17 (1988): 20.8 percent of total population
Population aged under 5 (1988): 8.9 percent of total population
Capital: Austin

by Md. Nazrul Hoque
and Steve H. Murdock

Texas, the Lone Star State, is the second largest state in the country by land area (after Alaska), and third largest in population. However, population density averages only 64.1 persons per square mile, ranging from 1,768.6 in Dallas County to 0.1 in Loving County. The eastern part of the state is more densely populated than the west and south.

Texas has historically had high rates of population growth, ranking sixth among the states in total population in 1960. By 1980, the only states having larger populations than Texas were California and New York, and Census Bureau projections suggest that Texas is likely to surpass New York sometime in the 1990s, being second only to California in 2000.

Population growth in Texas since 1980 has been characterized by an initial period of very rapid growth and extensive *in-migration* followed by a period of declining rates of population growth and *out-migration*. Net migration has been reversed, from a high of 2.9 percent in 1981-1982 to -0.5 percent in 1987-1988.

Numerous indicators suggest that population growth has now stabilized,

Tourism Div. Texas Dept. of Commerce



Texas has ridden a bumpy 1980s trail.

however, and it appears likely that further data could show renewed growth in the next few years. Although 80 percent of the population resides in the urban areas, Texas ranks third nationally (after Pennsylvania and North Carolina) in the number of residents classified as rural.

Texas is a heterogeneous state. Its physical, cultural, and socioeconomic characteristics vary widely from north to south and east to west. In 1980, Texas had the second largest Hispanic population and third largest black population of any state in the country: 21 percent of the population was Hispanic and 12 percent was black. By 2025, it is estimated that roughly 50 percent of the population will be members of minority groups.

The 1970s brought economic prosperity to Texas. The state made significant progress in increasing its economic level and decreasing poverty. Median family income increased from \$8,486 in 1970 to \$19,620 in 1980. In 1980, unemployment was 4.0 percent compared to 7.1 percent for the nation, while the total level of employment increased by 51.8 percent between 1970 and 1980, compared to 21.9 percent for the nation as a whole. Over the

same period, median years of education increased from 11.6 to 12.4.

The middle and latter 1980s have brought dramatic changes in Texas's economy as the prices for oil and gas, and agricultural products and exports have declined. As a result, the unemployment rate increased from 4.0 percent in 1980 to 7.7 percent in 1985. By July of 1987 it stood at 8.7 percent, 2.6 percentage points higher than the national rate of 6.1 percent. In 1985, approximately 16 percent of all Texans were classified as living below the poverty level; a 1-percent increase from the 1980 figure.

Since 1987 the state's economy has recovered substantially. In 1988, the unemployment rate was 7.3 percent and by March of 1989 unemployment was less than 7 percent. Moreover, state economic forecasters were indicating not only recovery of the state's economy but expansion. The state's demographic composition is changing and will become increasingly diverse in the coming decades.

Md. Nazrul Hoque is a research scientist and Steve H. Murdock is a professor and department head, at the Department of Rural Sociology at Texas A&M University.

POPULATION TODAY

Vol. 17, No. 9 September 1989

FEATURES

- 3 The 1990 Census may be adjusted for undercount**
Out-of-court settlement produces policy reversal with far-reaching but unclear impact
- 4 Dramatic fertility declines in two countries?**
Surveys report that Kenya's total fertility rate may have fallen to 6.7 children per woman; South Korea's, to 1.6
- 4 Down along the Potomac**
Family planning and population assistance supported while sex survey funding is killed
- 5 Swaziland in transition**
Fertility high but family planning programs show promise in this Southern African country
- 5 Where Americans are and where they're going**
Latest *U.S. Data Sheet* from PRB gives state-by-state population change, both 1980-1988 and 1987-1988
- 6 "Family demography" for undergraduates**
How one course teaches population fundamentals and the demographic dimension
- 7 To friends of PRB**
A dinner invitation
- 8 U.S. abortion equation changed by controversial Webster case**
Supreme Court narrows freedom to obtain abortion services; shadow cast on 1973's *Roe v. Wade* decision
- 12 Mauritania faces an uncertain future**
With a vast but barren land area, this West African country suffers from population growth and mounting ethnic divisions

DEPARTMENTS

- 2 From the editor's desk**
- 2 Speaking graphically**
- 5 Survey report (Swaziland)**
- 6 Demographer's page**
- 9 Softwhere**
- 9 Population update**
- 10 Take a number**
- 11 Current readings**
- 12 Spotlight (Mauritania)**

The image shows a portion of a 1990 U.S. Census form. It includes sections for:

- Print race**: A grid for recording race.
- Year of birth**: A grid for recording the year of birth.
- Is this house or apartment**: A section for recording housing status, including ownership, rental, and occupancy.
- Marital status**: A section for recording marital status (Now married, Widowed, Divorced, Separated, Never married).
- Ethnicity**: A section for recording ethnicity (No (not Spanish/Hispanic), Yes Mexican/Mexican Am, Yes Puerto Rican, Yes Cuban, Yes other Spanish/Hispanic).
- Type of unit**: A section for recording the type of unit (Total persons, Occupied, Vacancy).

The 1990 Census may be the first adjusted headcount. (See page 3.)



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FROM THE EDITOR'S DESK

Isn't it time we had a population museum?

Such a museum would encompass a tremendous variety of subjects. Dioramas with suitable plaques underneath, such as "Population 10,000 B.C." could show family units in different historical epochs, a saber-toothed tiger poised discreetly in the background.

Elaborate miniatures would illustrate the mushrooming of cities through the ages. Giant blinking-light maps might depict growth and migration, food production and pollution patterns. A multimedia exhibit à la *The Family of Man* could remind us of the diversity and universality of human beings from pole to pole.

Numerical abstractions could be illustrated in concrete terms: a

thousand (faces), a million (dots). One hundred billion (air-rifle BB's, one for every person born, enough to fill a bin 63 x 63 x 63 feet and weigh 40,000 tons, by the way). Museum goers' minds would boggle.

Standing at computerized, hands-on exhibits, visitors could play "what-if" with the graphics of demographic destiny. The life table's winnowing process might be illustrated by the world's biggest Pachinko pinball machine. A smaller version would be available in the museum shop.

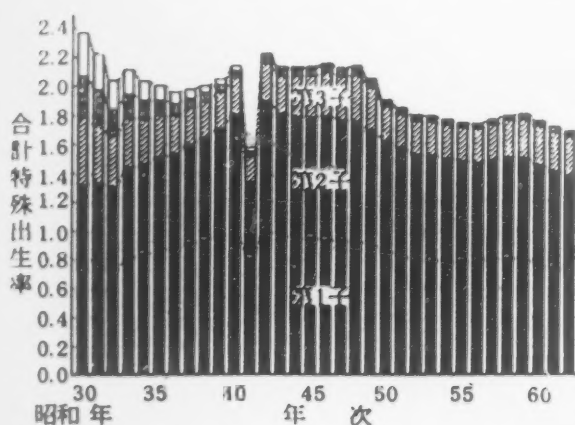
And at one end of the exhibit hall, a floor-to-ceiling window would face out on the bustling city outside. The plaque underneath "Population Present Day."

—Art Haupt

SPEAKING GRAPHICALLY

When Did You Say You Were Born, Miss?

図1 出生順位別、合計特殊出生率：昭和30～62年



Japan's fertility rate experienced a steep drop in 1966, the Year of the Fiery Horse. According to legend, a woman born in that year will kill her husband. In Japan's traditional calendar, each year was expressed by a combination of two calendar elements, a 10-year elemental cycle (Fire, Water, Tree) and a 12-year animal cycle (Horse, Sheep, Monkey). Fire and Horse years combine every 60 years. The above graph gives average lifetime births per woman in Japan along the Y-axis, with the birth year of these women along the X-axis. (The years are expressed in Shōwa years, that is years in the reign of Emperor Hirohito.) The sharp decline in Shōwa 41 (A.D. 1966) demonstrates that this 400-year-old superstition was still alive in the 1960s and significantly depressed childbearing. The next Year of the Fiery Horse will come in 2026.

Source: *Journal of Population Problems*, October 1988

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Census Subject to Possible Correction

U.S. census adjustment is closer to being a reality

In what appears to be an important policy change, the Census Bureau has agreed to consider adjusting the official figures of the 1990 Census for undercount.

The reversal in longstanding policy, certain to be controversial, emanates from an out-of-court settlement of a suit against the Bureau. In the suit, New York City and New York State (joined by Chicago, Los Angeles, Houston, Dade County, Fla., and the State of California) sought to compel statistical adjustment to compensate for anticipated undercounting or overcounting in the census.

Their concern is understandable. Census results have consequences—apportionment of the House of Representatives and state legislatures—and undercounting is more likely to occur inside cities than outside them, and more among minority groups than among the white majority.

The settlement was announced by the U.S. Departments of Commerce and Justice on July 17, 1989, which would have been the first day of the trial in Federal District Court in Brooklyn, N.Y.

"We are very pleased with the settlement, as it achieves our highest priority—preserving the integrity, fairness, and accuracy of the traditional census," stated Secretary of Commerce Robert Mosbacher.

"Lots of people say how wonderful it is to beat City Hall," New York Mayor Ed Koch said, "but how much more wonderful to beat the Feds."

To Adjust or Not?

Under the settlement, the Census Bureau will conduct the 1990 Census as usual. As usual, it will report the results to Congress and the states—but this time with the proviso that "the counts are subject to possible correction."

Meanwhile, an independent advisory panel of eight independent census "experts" are to be appointed by the Secretary of Commerce. These experts

U.S. Bureau of the Census



After the enumerators, the adjusters

will make a formal recommendation to the Secretary whether, in their view, adjustment is necessary (Scheduling has yet to be worked out for the appointment and report of this panel.)

The scheduling for the 1990 Census now takes new form.

March 10, 1990: Guidelines for consideration of a possible adjustment are

A postcensus survey would determine undercounts

published by Commerce. These are made public before Census Day so that no one can charge that the guidelines were tailored by the government to adjust displeasing numbers.

April 1, 1990 and after: Decennial census is held.

July 1990: Postenumeration survey of 150,000 households is held.

Dec. 31, 1990: State-by-state census results are reported to Congress—"subject to possible correction."

Early 1991: After hearing recommendations of the panel of experts, the Secretary of Commerce announces decision as to whether to adjust the census.

April 1, 1991: Census figures down to

the local level are reported to the states—again, "subject to possible correction."

July 15, 1991: By this date, either official adjusted census figures are released, or, if no adjustment is made, Commerce issues a detailed statement of the grounds for the decision.

"Due Consideration"

Are "the Feds," in Mayor Koch's words, "beaten," or cannily retrenching? It's too early to be sure.

By issuing results before adjustment, the Census Bureau meets the timetable prescribed for it by law (Dec. 31 and April 1). How far reapportionment can proceed, based on numbers that are "subject to possible correction," is hard to say.

Or will the Commerce Secretary simply finesse the issue? He does have authority, after all, to give a polite nod to the experts and guidelines but conclude that adjustment is not needed this time around.

Attorneys for the litigating cities have nevertheless expressed satisfaction with the provisions of the out-of-court settlement. Half the appointments to the panel of experts will be recommended to Commerce by the New York City Corporation Counsel. And—no matter what adjustment option the Commerce Secretary chooses—"We are going to have the data," Los Angeles City Attorney James K. Hahn told *The Los Angeles Times*. "We are going to know. And if [the Secretary] doesn't follow recommendations to adjust, he is going to have to justify his decision."

How will the postenumeration survey be conducted? The nation's census blocks would be assigned to one of 100 categories. In July 1990, interviewers will visit some 150,000 housing units across the country in 5,000 census blocks randomly chosen to proportionately represent all 100 categories. Some 375,000 people are to be interviewed. (There were 2.6 million census blocks in the U.S. as of 1980, and 99.9 million housing units as of 1985.)

Continued on page 8

Kenya and South Korea Reporting Fertility Drops

The Preliminary Report of the 1988 Kenya Demographic and Health Survey shows a total fertility rate (TFR) of 6.7 lifetime births per woman — which may sound high compared to most countries but would constitute a remarkable decline for a country previously known for its very high fertility.

The 6.7 figure is significantly lower than the TFR of 7.7 measured in Kenya's 1984 Contraceptive Prevalence Survey and the 8.1 value independently estimated by demographers. The Report notes that some of the slide may be due to measurement differences between the two surveys, but that the 6.7 TFR is not inconsistent with increases in family planning usage, now estimated at 27 percent of Kenyan married women.

More news on Kenya's reported fertility fall will appear in the October issue of *PT*.

An even more astounding TFR drop is the 1.6 children per woman for South Korea reported in a 1988 national survey.

The survey was conducted by the Korea Institute for Population and Health and described in their June 1989 newsletter. Should the 1.6 measurement be confirmed, it would mean that South Korea's fertility had not only plummeted to below-replacement levels typical of more developed countries, but was now lower than half of them. (By comparison, the TFR in East Germany is 1.7; in France, 1.8; in the U.S., 1.9; while replacement level is about 2.1.)

Two decades ago, South Korean fertility stood at 5.4 lifetime children per woman. The explanation for such an unparalleled fertility decline probably lies in the extremely successful Korean family planning program. Contraceptive use among couples of reproductive age was 77.3 percent in 1988. Some 42.2 percent of couples reported that their method of contraception was sterilization.

— C.H.

WASHINGTON WATCH



Census News

The House Post Office and Civil Service Committee approved legislation to improve the Census Bureau's ability to attract a qualified work force for the 1990 Census. The bill would exempt retired federal employees and military officers hired for temporary census positions from a law which requires a reduction in their annuity if they are reemployed by the federal government. The bill now moves on to the floor of the House of Representatives, where it is expected to pass under suspension of the rules. Senator John Glenn (D-Ohio) is expected to introduce similar legislation in the Senate in the near future.

In the Senate, immigration legislation designed to increase the flow of skilled and educated immigrant workers was approved on July 13.

Michigan pollster Barbara Bryant is reportedly being considered by the Bush Administration to be the next Census Bureau director, though she has yet to be formally nominated. Alan Heslop, mentioned as a possible candidate (see *PT*, June 1989), earlier withdrew from consideration.

Family Planning

The Senate Labor and Human Resources Committee has approved legislation to reauthorize the domestic family planning program, Title X of the Public Health Service Act. If it is ultimately signed into law, the bill would be the first reauthorization of the program since 1985. (It has been sustained by continuing resolutions since that time.) The bill provides \$548.7 million in fiscal years 1990, 1991, and 1992.

Sexual Behavior Survey

On July 25, the House Appropriations Committee deleted the \$11 million funding for a pilot study of Americans' sexual behavior, all but killing the study's prospects for passage this year.

The study, originally scheduled to begin earlier this year, has become mired in controversy amid growing opposition from some members of Congress and the Bush Administration. The survey of 2,300 people, a pretest to a national survey expected to interview 20,000 Americans over a two-year period about their sexual experiences, attitudes, and behavior, is being handled by the University of Chicago's National Opinion Research Center, for the National Institute on Child Health and Human Development (NICHD).

The survey would provide researchers with the first updated data on sexual behavior and practices since the landmark Kinsey Report of the 1940s and could help to provide a better understanding of how the AIDS epidemic is spreading in the United States. The need for such a study was recommended by the National Academy of Sciences in 1986 and again recently by the General Accounting Office in a report on the AIDS epidemic.

NICHD's effort to provide this information has been endorsed by the President's Commission on the Human Immunodeficiency Virus Epidemic, 23 national health and social science groups, and more than 40 members of Congress. However, the explicit nature of portions of the study's questionnaire has lead some conservative members of Congress to charge that the survey would represent a government intrusion into people's private affairs.

Foreign Assistance Act

The House has passed the International Economic Cooperation Act, a bill authorizing \$11.5 billion annually in fiscal years 1990 and 1991 for foreign economic, military, and development aid. The House Foreign Affairs Committee earmarked \$202 million in fiscal year 1990 and \$206 million in 1991 for family planning programs.

This move appears to ensure the ear-

Continued on page 9

Altered States On Latest U.S. Data Sheet

Just out, the 1989 *United States Population Data Sheet* – the eighth edition since this PRB publication began in 1981 – features a plethora of demographic statistics for the 50 states and the District of Columbia, incorporating population changes both from 1980 to 1988 and from 1987 to 1988.

Traditional Rustbelt states such as Michigan experienced a modest turnaround during the last half of the 1980s. Population boom states in the Sunbelt, on the other hand, particularly Texas, have lately seen uncharacteristic out-migration, a result of the "oil bust."

Population totals, rankings, minority population, and dependent age groups are given for each state. The Data Sheet also features state-by-state net migration estimates for 1987-1988, data not readily available in published form.

And with U.S. interdependence on the global economy of increasing interest, the Data Sheet's maps, graphs, and figures reveal growing U.S. international involvement.

Perhaps suprisingly for the seemingly homogeneous U.S., the Data Sheet shows great differences between individual states' natural increase rates (i.e., the number of births minus the number of deaths per 1,000 population). These rates range from West Virginia's 1.6 rate (virtually zero population growth) all the way up to Alaska's 18.5 (higher than Thailand's). This growth measure of fertility and mortality is, it should be noted, very sensitive to age structure, (i.e., the proportion of a state's population who are in their childbearing years).

—C.H.

PRB members receive their copies of the *United States Population Data Sheet* in the same mailing as this issue of *Population Today*. Additional copies of the Data Sheet can be ordered from the Population Reference Bureau, Inc., Circulation Dept., P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB. Prices are \$3.00 ea., 2-10, \$2.75 ea., 11-50, \$2.50 ea., over 50, \$2.25 ea. Orders for \$50 or less must be prepaid and include \$1.00 for postage and handling.

SURVEY REPORT

Swaziland

Virtually surrounded by South Africa, Swaziland is one of the smallest countries in Africa, with a land area slightly smaller than New Jersey and a 1989 population of 763,000.

Swaziland is influenced by both its traditional heritage and that of the modern world. With a per capita GNP of \$700 (1987), Swaziland ranks as a middle income country, yet, as is true in most sub-Saharan African countries, the people are highly dependent on agriculture for subsistence, and health indicators reveal a population more characteristic of poorer nations.

Results have now been published from the Family Health Survey (FHS), conducted in 1988 by the Swaziland Ministry of Health with technical assistance from the U.S. Centers for Disease Control, which was specifically designed to provide decision makers in the Ministry of Health with current data on which to base health policies.

Swazi fertility is high, though not unusually high for Africa; at the total fertility rate estimated by the survey, a woman would give birth to 5.1 children during her life. Urban women would have an average of 3.5 children while rural women would have 5.4 children. (These survey figures are lower than previous estimates.) Indicators of completed childbearing show that overall fertility has declined; the average number of children ever born to women age 45-49 is 5.4.

More than three-quarters of the women know of the pill or injection, six in 10 recognize the IUD or the condom, but fewer than half are familiar with female sterilization. Not surprisingly, more than three-quarters of the men know of condoms, and seven in 10 know of the pill.

The FHS provides unexpectedly

positive information on contraceptive use and indicates that the National Family Planning Program, begun in 1973 by the Ministry of Health, has had an impact. Seventeen percent of married women are currently using contraception and one-third have ever used a method. The pill is the most common method, used by 4.8 percent of all married women. It is followed by injection (4.4 percent), female sterilization (2.4 percent), and IUD (1.5 percent). Rhythm and withdrawal are each practiced by about 1 percent, while condoms, foaming tablets, male sterilization, and "other" (probably traditional methods) are together used by less than 2 percent of married women.

Contraceptive use in the urban areas is twice that of the rural regions, increases with age up to age 30-34, and is highly correlated with a woman's level of education.

Child health indicators show that many children suffer from common childhood diseases. Almost one-quarter of the children under age 5 had had diarrhea in the two weeks before the survey, but 81 percent were treated with oral rehydration therapy (ORT), an inexpensive and effective treatment for the dehydrating effects of diarrhea.

Immunization coverage of children under 5 years old for tetanus is almost complete (93 percent). However, only about half of these children have received complete vaccination against diphtheria-pertussis-tetanus, polio, or measles.

Recognition of AIDS is high among both women (84 percent) and men (91 percent), with knowledge tending to be higher in the urban areas, among those under age 35, and among those with some education.

—B.S.

DEMOGRAPHER'S PAGE

Family Demography: A New Approach to The College Population Course

by William D. Mosher

This Demographer's Page is adapted from a paper presented at the Annual Meeting of the Population Association of America in Baltimore, Maryland, March 30-April 1, 1989. The opinions expressed in this paper are solely those of the author.

Reprint requests may be sent to: William D. Mosher, 10118 Brock Drive, Silver Spring, Md. 20903.

This paper describes my experience teaching an undergraduate course called "Family Demography" at the University of Maryland University College, the University of Maryland's "evening school." There are no prerequisites; no previous courses in sociology, demography, or mathematics are required. The course is aimed at juniors and seniors, but not graduate students.

The course is designed to be interesting for the students, but rigorous. I have four basic goals: (1) to cover the basic elements of a standard introductory population course; (2) to teach basic demographic measures and to overcome student fears about using simple statistical data; (3) to examine the demographic aspects of important individual life choices; and (4) to show the uses of demographic research in understanding some important public issues. Judging by their comments, many of the students felt the course succeeded at these goals.

Materials

There is no single book designed for such a course, so I use the following materials:

1 *Introduction to Population*, by Kenneth Kammeyer and Helen Ginn (1986). This is a short text, only 280 pages. I use about 230 pages of it. It covers the essentials briefly and well.

2 *Life Choices*, by Robert E. Kennedy, Jr. (1986). This is a well-written, easy-to-understand book that spells out how demographic changes affect our choices about marriages, parenthood, education, occupation, homeownership, migration, and retirement. The book personalizes demography in an effective way in only 160 pages. Student response to the book has been enthusiastic.

Population fundamentals in one semester, 15 sessions

3. Finally, I use about 100 pages of other articles. Many of these are very short—often five pages or less—but they add variety and cover topics such as child care, working women, teenage pregnancy, and others that are not covered in textbooks or readers.

My main sources of lecture material are reports from the Census Bureau and the National Center for Health Statistics, the *Statistical Abstract of the United States* (a good source of data for lectures), *American Demographics* (which shows how demography can be used in business), and PRB publications.

Course Outline

The course meets once a week for 2 hours and 40 minutes. There are 15 sessions, ordered as follows:

1. **Introduction to demography.** Definition of demography; the family, and cohorts. A brief history of world population growth, emphasizing the links between death rates, the importance of childbearing, and the roles of women. The current size and growth of the world population. Vital statistics, censuses, and surveys as sources of demographic data.

2. **Age and sex composition and the future.** Population pyramids and other measures of age composition. The effects of cohort size on education, the military, the labor market, housing, etc. (some of the practical applications of demography in business, government, and education).

3. **Projections, education, and occupation.** A gentle introduction to simple tables, examining two topics of interest to nearly all students: the dollar value of a college education and the fastest growing occupations.

4. **Poverty and welfare.** How poverty is measured. Major federal programs for the poor. Differences between whites, blacks, and Hispanics in income and poverty. From this session on, differences between blacks and whites are a major theme in the course. White-black differences are a way to study the effects of social stratification and poverty on life chances and on the quality of life.

5. **Fertility I.** Data sources. Why demographers study fertility differentials; findings by race, religion, and socioeconomic status; use of intermediate variables to explain trends and race differences in fertility in the U.S.

6. **Fertility II.** Teenage pregnancy, premarital sex, and abortion. Trends and black-white differentials in premarital sex, teen pregnancy, and abortion in the U.S. Comparisons of U.S. and Europe. Reasons why other industrial countries have lower rates of teenage pregnancy than the U.S. Characteristics of women obtaining abortions. According to the student evaluations, this is the students' favorite lecture.

7. Fertility III. Delayed childbearing, infertility, and cesarean section, focusing on trends in the U.S., and emphasizing the theme that baby boomers do not have unprecedented levels of delayed childbearing or infertility. Most of the students are surprised to hear this.

8. Migration and homeownership. Theories of migration. The age patterns of migration and home ownership. The effect of the baby boom on the U.S. housing market.

9. Marriage, divorce, and remarriage. Sources of data, trends, and black-white differentials. Types of marriage: arranged, traditional, and egalitarian, the consequences of each type for men and women.

10. Trends in household composition in the U.S. This includes unmarried cohabitation, living alone, adoption, and children's experience of marital disruption.

11. Aging, retirement, health, and mortality. Effects of the baby boom and baby bust on the social security program, and implications for one's own retirement planning. Race, sex, and marital status differences and trends in mortality in the U.S. AIDS.

12. Working women and child care. Causes of the increase in female labor force participation in the U.S. Explanations of the sex difference in earning. Policies on working women and child care in the U.S. and Sweden.

13. Population and family policy around the world. Focusing on policies in Europe, China, and the U.S. I include a film on China's one-child policy here.

14. Review and conclusions. A detailed review lecture on the entire course.

15. Final exam.

Tests and Assignments

In weeks 5, 10, and 15, I give tests that are a mixture of multiple choice and short-answer questions. I also give two assignments. The first requires the students to compute and interpret

some simple demographic measures including birth and death rates and an age pyramid, for Maryland in 1980. The second is a five- to eight-page paper, using the lecture notes and readings, on the demographic differences between whites and blacks in the U.S.

Conclusions

The course outlined above presents a fresh approach to the undergraduate introductory population course, and emphasizes several themes. Some of these are themes in the courses described by Poston and Sullivan (1986), and by Weeks (1986), but there are others as well.

1. The first is that the course is quantitative but not highfalutin. I use simple numbers, rates, and percentages in every lecture, in both assignments, and in many of the test questions. By the end of the course, many of the students realize that they can use and interpret numbers and rates without fear.

2. The course shows that many of life's fundamental choices – including education, marriage, parenthood, homeownership, occupation, and retirement – have measurable consequences which have been studied. Thus, demography can be used to make more informed choices about one's own life course (Kennedy, 1986).

3. Another theme is that many social behaviors – including education, entering the labor market, marriage, childbearing, home renting and buying, retirement, and many others – are age-related. This makes it possible to project their aggregate trends. It also makes clear some of the practical applications of demography in business, government, and education. Finally, these patterns by age are among the best documented in demography, which allows the course to stress what we know well.

4. Finally, the course shows that government agencies and demographers publish data that shed light on

many political issues, ranging from poverty to abortion and teenage pregnancy. As students see these issues analyzed objectively with demographic data, they learn that demographic research can help them understand and deal with practical problems that they hear about, and face, every day.

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PRB Awards Dinner

The Board of Trustees and the Staff of the Population Reference Bureau, Inc., cordially invite you to celebrate PRB's 60th anniversary at the 1989 Annual Awards Dinner recognizing outstanding contributions in the field of demography.

The dinner speaker will be Dr. Richard Berendzen, President of The American University.

Date: Thursday, Oct. 26, 1989

Time: Cocktails (cash bar) 6:30
Dinner and Awards
Ceremony 7:15

Place: National Press Building
14th and F Sts., N.W.,
Washington, D.C.

Awards Dinner tickets are \$40 each. Send check to Population Reference Bureau, Attn.: Dorsey Hampshire, 777 14th St., N.W., Suite 800, Washington, D.C. 20005. Checks payable to PRB.

Abortion Outlook Changed By Webster Decision

On July 3, 1989, the U.S. Supreme Court, in a 5-to-4 ruling, announced its decision to uphold a Missouri law limiting access to abortions under certain conditions in the case of *Webster v. Reproductive Health Services*.

The decision had been much awaited by advocates on both sides of the abortion debate and was seen as the most consequential abortion decision since 1973's *Roe v. Wade*, which had made abortion legal under constitutional guarantees of privacy and set up a trimester framework for regulating abortion.

What precisely did the Court decide or not decide? Some pointers:

1. The July 3 decision did not "criminalize" abortion, that is, it did not overturn the 1973 case of *Roe v. Wade*. However, the court's decision did erode some of that case's guidelines.

2. The Court did, however, uphold a Missouri ban on the use of public funds, employees, and facilities for any abortion-related activity except when necessary to save the mother's life. This continues previous rulings.

3. The Court upheld the Missouri provision that requires physicians to perform tests of fetal viability before performing an abortion on a woman 20-24 weeks pregnant. The exact nature of these tests was left to the physician's discretion.

It is this third facet of the ruling which challenges *Roe v. Wade*. In its 1973 decision, the Supreme Court created a trimester framework for regulating abortion: 1) during the first three months, restrictions could not be applied to a woman's access to abortion; 2) during the second trimester, states could apply reasonable regulations only to protect women's health; and 3) during the third trimester, when most fetuses are viable, abortion is not allowed except to protect the mother's life.

The Webster decision appears to change what states may do during the second trimester. Some analysts feel that this will open the door for other kinds of second-trimester regulations — regulations which will not make abor-

tion illegal but which will restrict access to abortion services.

Past Court rulings have never allowed regulations which restrict access, but with the conservative cast of recent Court appointments, past behavior may no longer predict future decisions. The Supreme Court has agreed to hear three more abortion cases during its next session, two concerning parental approval (Ohio and Minnesota) and one from Illinois regarding standards for abortion clinic facilities and equipment. In addition, by upholding the requirement for viability testing, the Court is allowing a shift in emphasis away from maternal health to the health of the fetus.

In the short run, observers believe, the Webster decision is not likely to drastically reduce the number of abortions in Missouri. Whether its effects carry more widely will be determined as individual state legislatures review their current abortion laws.

— N.Y.

Census Correction

Continued from page 3

By comparing survey tallies for a block with the 1990 Census count of that same block, each block's under- or overcount can be calculated. The calculations from the 5,000 surveyed blocks will then be applied to all blocks in the same category across the country.

Looking to the Future

Although the 1980 Census was probably the most accurate in American history, it undercounted the white-and-other-races population by an estimated 0.7 percent (or about 2 million people), and undercounted the black population by 5.9 percent (or 1.5 million people). Since cities and the black community are also strongholds of relative Democratic Party strength and Republican Party weakness, Democratic politicians often favor census adjustment, and Republican ones oppose it.

For two centuries, the numbers used for apportionment have consisted of the raw national head count "as is," once checks in the field for accuracy and completeness were finished. Any adjustment was considered to be unwise tinkering with this proven approach.

But in 1984, spurred by an outbreak of post-1980 Census lawsuits from localities protesting what they viewed as relative undercounting of their area, the Census Bureau began studying the feasibility of adjustment. (It has since survived all those litigious assaults.) Research indicated that it would be statistically possible to improve census accuracy with a postenumeration survey of 300,000 households.

In late 1987, however, the Commerce Department announced that it had decided against adjusting the 1990 Census. Soon after, the Bureau's Barbara Bailar, who had guided the adjustment research, resigned. Bailar, Associate Director for Statistical Standards and Methodology, did not give her reasons for leaving, but reportedly after initial opposition, she had come to favor the adjustment approach.

The reduction in sample size in the postenumeration survey — to 150,000 — has caused some controversy. Bailar feels that a 300,000-household survey would be preferable; for instance, a more comprehensive breakdown of ethnic groups (such as Hispanics) would be possible. Nevertheless, Bailar, now at the American Statistical Association, is pleased that the Census Bureau has come around to the idea of adjustment. And, she says, "if it's well worked out," the present 150,000-household survey would be adequate for adjustment purposes.

Will the adjusted or unadjusted figures end up being used for reapportionment? Will the final figures themselves be the object of further lawsuits? To what extent will they result in apportionment changes? (Under some scenarios, effects on congressional reapportionment could be minimal; see *Demographer's Page*, *PT*, March 1989.) The new policy has raised as many questions as answers, and where it will take the U.S. enumeration process, only time will tell.

— A.H.

Washington Watch

Continued from page 4

marking of funds specifically for population – the earmarking procedure had been called into question earlier this year by a House task force (see *PT*, June 1989).

After the full committee approved the foreign aid package, it was sent to the House floor where an amendment was attached to the bill that would bar economic aid to any agency or program that supports or participates in forced abortions or involuntary sterilization overseas. This amendment, introduced by Rep. Chris Smith (R-N.J.), also prohibits the United States from providing assistance to foreign non-governmental agencies that perform or promote abortion as a form of family planning (commonly referred to as the Mexico City policy).

The Smith Amendment combines the Mexico City policy and prior amendments regarding coercion resulting in the defunding of the United Nations Population Fund (UNFPA). This amendment now puts into law provisions which have annually been included in the appropriations bills and nullifies the possibility of overturning the provisions in the appropriations process.

While the bill has passed the House, the Senate has yet to complete work on its foreign assistance package.

In related news, M. Alan Woods, the Administrator of the Agency for International Development (AID) died of cancer on June 29. Woods, 43, had advocated that U.S. foreign aid programs promote self-sustaining economic growth in developing countries and urged reform of the Foreign Assistance Act. Deputy Administrator Mark L. Edelman has been named Acting Administrator while the White House considers Woods's replacement.

— Brian Cove

Brian Cove is a legislative program assistant in the Washington, D.C. office of the Population Resource Center. The Center monitors legislative issues of concern to the Population Association of America. Neither the Center nor the Association advocates any particular population policy but works to protect funding for quality demographic research.

SOFTWARE

POPLINE on CD-ROM. The world's largest population bibliographic database is POPLINE. Heretofore available as an on-line service, POPLINE is now also available from Johns Hopkins University on CD-ROM disks, readable on an IBM PC or Macintosh equipped with a CD-ROM drive. The disk is updated semiannually.

Software is included to enable users to search, download to disk, or print the CD-ROM's contents, which consist of a fully indexed collection of over 165,000 citations with abstracts.

Obviating the need for telecommunications and on-line costs, this new access mode is

more economical for those who use POPLINE heavily (such as schools). POPLINE CD-ROM is available to developed countries on a subscription basis for \$750 per year, which includes documentation and toll-free hotline support. It is also available free of charge to organizations in selected developing countries through a project funded by the UN Population Fund. For more information, contact Ms. Anne Compton, Center for Communication Programs, The Johns Hopkins University, 527 St. Paul Place, Baltimore, Md. 21202. Phone (301) 659-6300, Fax (301) 659-6266.

— A.H.

POPULATION UPDATE

Estimated United States Population:

As of May 1, 1989	248,341,000
As of May 1, 1988	245,889,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1042.

Estimated World Population:

As of September 1989	5,249,000,000
Annual growth	93,000,000

From the mid-1989 population on PRB's 1989 *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: March 1989

Item	12 months ending with March					
	Number		Rate			
	1989	1988	1989	1988	1987	1986
Live births	3,917,000	3,835,000	15.9	15.7	15.5	15.8
Deaths	2,152,000	2,165,000	8.7	8.9	8.6	8.7
Natural increase	1,765,000	1,669,000	7.2	6.8	6.9	7.1
Marriages	2,382,000	2,398,000	9.7	9.8	10.0	10.1
Divorces	1,186,000	1,159,000	4.8	4.8	4.8	5.0
Infant deaths	38,400	38,500	9.8	10.1	10.3	10.5
Population base (in millions)			246.3	243.9	241.6	238.9

Note: Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source: *Monthly Vital Statistics Report* (Vol. 38, No. 3) from the National Center for Health Statistics.

TAKE A NUMBER

Ethnic Estimates: The idea of a mid-decade census may be long dead (it was proposed and killed during the 1970s). But the Census Bureau has recently released its first mid-decade set of race and ethnic estimates for states, metropolitan areas, and selected counties – a new venture for the Bureau. (In 1978, black populations had been estimated for states on a trial basis.)

These new estimates are based upon a methodology called EAR, evaluation of which has not yet been completed but will be by the time the 1990 Census results come in. (EAR stands for Extended Administrative Records.) The methods are an extension of the Bureau's Administrative Records Method, which has been used since 1975 to estimate intercensal populations. The tables

below offer but a sample of the rich body of data on U.S. ethnic change contained in "Population Estimates by Race and Hispanic Origin for States, Metropolitan Areas, and Selected Counties: 1980 to 1985," *Current Population Reports*, Series P-25, No. 1040-RD-1, available from Census or the GPO.

—C.H.

The 10 States with the Largest Populations of Blacks, Hispanics, and Other Races (in 1000s):

Black

	1985	1980	Percent Change 1980-85
United States	28,902	26,698	8.3
1 New York	2,733	2,515	8.7
2 California	2,074	1,832	13.3
3 Texas	1,909	1,708	11.8
4 Illinois	1,775	1,682	5.6
5 Georgia	1,600	1,466	9.2
6 Florida	1,565	1,350	15.9
7 North Carolina	1,392	1,320	5.4
8 Louisiana	1,348	1,240	8.8
9 Michigan	1,243	1,200	3.6
10 Ohio	1,136	1,081	5.1

All of the above states saw their proportions of blacks increase – except for Texas, where, due to rapid rises among Hispanics, the black proportion fell.

Hispanic

	1985	1980	Percent Change 1980-85
United States	17,517	14,251	22.9
1 California	5,873	4,537	29.4
2 Texas	3,690	2,996	23.1
3 New York	1,879	1,653	13.7
4 Florida	1,102	851	29.5
5 Illinois	755	617	22.4
6 New Jersey	573	486	18.0
7 New Mexico	551	482	14.2
8 Arizona	533	447	19.3
9 Colorado	383	341	12.5
10 Pennsylvania	159	137	15.5

In terms of numbers, the Hispanic population is growing faster than any other minority and will undoubtedly pass the 20 million mark in 1989.

ADDENDA

Signs of the Aging of America-VII



You know you're getting old when Questioning Youth starts to grouse about the Establishment, and they mean you.

NAFTAT is the National Organization for the Advancement of Time, a group of waggish young promoters bent on curing the U.S. of Baby Boomer nostalgia. "We refuse to live in somebody else's past," proclaim the NAFTATers, who plan to fight "this sinister turn" in American life with slogans like "Just say now," and public events such as "Boycott the Past Week." Contact NAFTAT, 6201 Sunset Blvd., Suite 114, Hollywood, Calif. 90026.

Other Races

	1985	1980	Percent Change 1980-85
United States	7,293	5,359	36.1
1 California	2,315	1,572	47.3
2 Hawaii	692	603	14.6
3 New York	516	385	34.1
4 Texas	315	188	67.1
5 Illinois	264	195	35.3
6 Washington	241	178	35.4
7 Oklahoma	229	192	19.4
8 Arizona	213	180	18.3
9 New Jersey	184	122	50.5
10 New Mexico	156	117	33.4

The "Other Races" population comprises all those who are neither white nor black. The largest two groups are Asian and Pacific Islander, of whom there were 3.5 million in 1980, and American Indians, numbering 1.4 million.

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St. N.W., Washington, D.C. 20005.

A MORTALITY STUDY OF ONE MILLION PERSONS by Demographic, Social, and Economic Factors: 1979-1981 Follow-Up (First Data Book),

by Eugene Rogot et al., U.S. Dept. of Health and Human Services, National Institutes of Health, NIH Publication No. 88-2896, March 1988. (Contact author, National Heart, Lung, and Blood Institute, Fed. Building, Room 2C-08, 7550 Wisconsin Ave. N.W., Bethesda, Md. 20892.)

Mortality differentials as viewed from social-science perspectives have not been an especially publicized area of research to now. The present volume launches an expected series of project publications from the U.S. National Longitudinal Mortality Study that could well make a landmark contribution to state-of-the-art knowledge and analysis in this important field.

At the project's heart is a system for "matching" individuals identified as subject to mortality in the U.S. since 1979 with U.S. deaths among such individuals since that year. The population source consists of close to a million individuals previously documented in seven Current Population Survey samples, all but one taken about 1980, plus a sample drawn from the 1980 Census. These have been adapted to provide numbers of person-years lived – the denominators needed for death rates – during 1979-1981, the publication's study period.

The data on deaths have been assembled as part of a "National Death Index" system designed to

enhance computer capabilities for distinguishing nonsurvivors and survivors among each of the survey population cohorts identified as alive at the beginning of 1979.

Judging from the data presented in this volume, the demographic and socioeconomic depth and range of measures to be generated will go far beyond any ever assembled in this country, not only on differentials proper but also on the paired components from which differentials are derived.

The characteristics for which information on deaths and population size is provided are: race (for white, black, and "other" categories), region (nine census divisions), SMSA status (central city, suburban, and non-SMSA components), nativity (U.S., foreign, and "unknown"), Hispanic status (five categories), education (eight levels), family income (seven intervals), household size (eight categories), marital status (five categories), employment status (seven categories), major occupation (12 groupings), and major industry (12 groupings).

Among the study's numerous main empirical findings, a major one surely is that it reconfirms in depth the black-white "crossover" patterns which have become familiar in previous mortality comparisons (lower white mortality rates at the pre-elderly ages, higher rates thereafter), both for all causes combined and for significant main-cause classifications. A second main indication, involving black males under 65, is that relative mortality risks of ischemic heart disease are seven times higher among those not living in an SMSA than they are for those living in the suburban parts of SMSAs. Surprisingly, foreign-born men have lower all-cause relative mortality measures than

do native-born men, for women, in contrast, the corresponding measures are essentially equal.

Some significant user limitations should be noted. Because of the deeply cross-classified population and cause-of-death aggregates considered, observed numbers of deaths for numerous categories are often zero or so small as to rule out statistically meaningful death rates or relative mortality measures. For non-whites, both male and female, such measures are more often omitted than derived for any age group among the 130 cross-classifications theoretically possible of cause-of-death by characteristic.

A second limitation, suggested rather than addressed by the report, is the fact that over 10 percent of the total population sampled involved use of a 1973 survey. Despite the changes that could have intervened during 1973-1979 in most of the individual characteristics under study, corresponding 1973 and near-1980 characteristics have apparently been combined even without allowance for this fact.

A third limitation is that the data as presented document all but one characteristic (race) singly.

Each of these limitations, or all in combination, could be substantially overcome in future (as well as retrospective) matchings by adding to the ongoing study's population base, by modifying definitional or data processing routines, or by both such adaptations.

In sum, the present volume represents an ingeniously conceived addition to the main sources available for documenting, analyzing, and developing policy responses to mortality differentials in this country.

— George J. Stolnitz

SPOTLIGHT

MAURITANIA

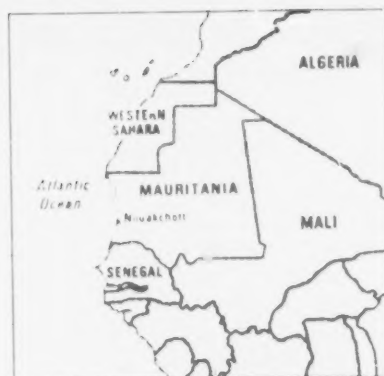
Population (mid-1989): 2.0 million
Land area: 397,950 sq. miles
Pop. density: 5 persons per sq. mile
Births per 1,000 pop.: 46
Deaths per 1,000 pop.: 20
Rate of Natural Increase: 2.7 percent
Total Fertility Rate: 6.5 children per woman
Infant Mortality Rate: 132 infant deaths per 1,000 live births
Life Expectancy: 45 years
GNP per capita (1987 est.): \$440
Capital: Nouakchott

by Alex de Sherbinin

The West African country of Mauritania has a population slightly larger than that of New Mexico with three times the land area, making it one of the world's least densely settled countries. If its uninhabited expanses were any indication of potential, the country would be doing well indeed. Yet the vagaries of climate, swarms of locusts, a population growth rate of 2.7 percent, debt burdens, and growing ethnic divisions have created an uncertain future for the country.

In Mauritania's Saharan north, the landscape is one of shifting sands, rock massifs, and occasional desert oases, supporting an economy of camel herding and date cultivation. Rainfall increases gradually towards the south and reaches 24 inches annually in the Sahelian belt along the Senegal River, the country's breadbasket where much of the rural population resides. There, irrigated fields of rice and corn have been added to the traditional rain-fed crops of millet and sorghum.

The country was agriculturally self-sufficient until the late 1960s, but since the early 1970s it has depended increasingly on imports and food aid. In the early 1970s and again in the early 1980s, severe droughts resulted in a rural exodus as people left subsistence herding and farming in affected areas to settle along the country's east-west highway (the "route of hope") and in squatter set-



tlements around the coastal, capital city of Nouakchott.

As in other Western Africa countries, fertility is high (an average 6.5 lifetime births per woman). In the 29 years since Mauritania gained independence from France in 1960, its population has a little more than doubled (from 991,000). And if current growth continues, the population could double again by 2015.

At the last census in 1976, Moors, a heterogeneous group of Arab/Berber stock, comprised two-thirds of the population. As is the case in the Sudan, Chad, and Niger, the Moorish northern population identifies closely with its North African neighbors, while blacks in southern Mauritania are ethnically affiliated with groups in Mali and Senegal. Although both groups are Islamic, tensions between the Moors and blacks flared in 1987, and again in the spring of this year.

Racial tensions are not new to Mauritania. However, more recent protests have had demographic connections, as southern blacks came to believe that they form a national majority and protested the "Arabization" of the country by the Moors. (It should be noted that the results of the 1988 census, which are still unpublished, will not present data on race or ethnic affiliation.)

Conflicts between Mauritians and neighboring Senegalese probably have similar roots. Following a skirmish

between Moor herders and Senegalese farmers in April 1989, Moor shops in Dakar and Thies were looted and many of the Moor shop owners were forced to return home to Mauritania. Retaliatory attacks in Nouakchott on black Africans with Senegalese connections left some 200 dead. Mauritania has subsequently deported over 40,000 blacks to Senegal.

Attempting to increase the agricultural productivity of the Senegal River territories and to encourage resettlement outside of Nouakchott, the Mauritanian government implemented land reform laws which have made it legal for individuals to claim "unused" lands along the river in order to establish irrigated fields. These lands were traditionally considered to belong to local lineages, which exercised usufructuary rights over their properties. The disproportionately rapid population growth in the south, coupled with increasing competition for arable land from outsiders, will likely lead to a greater number of land disputes in the river valley.

Mauritania has no overall population policy in effect at present. Some official statements have indicated that further growth may be desirable for development purposes. The primary thrust of government health programs has been to reduce morbidity and mortality, especially among infants, children, and mothers. Access to contraception is not supported, and only 1 percent of married women are estimated to be practicing any form of contraception.

At a 1987 conference sponsored by the Ministry of Health, however, religious holy men concluded that contraception and family planning are permissible under Islam. Although this did not result in a change of government policy, it signals that there would be little opposition on religious or moral grounds to future implementation of family planning programs.

Alex de Sherbinin is a geographer and an information specialist at PRB.

POPULATION TODAY

Vol. 17, No. 10 October 1989

FEATURES

- 3 Contraceptives around the world**
In less developed countries, close to half of all couples of childbearing age may now be contraceptive users
- 4 Gains of U.S. blacks have stalled since the 1970s**
Economic stagnation, racial discrimination cited in major new study
- 5 The factors behind Kenya's surprising fertility decline**
Average lifetime births per woman down to 6.7 children as contraceptive knowledge and use rise
- 6 State-by-state poverty data getting harder to calculate**
How reliable are the CPS estimates?
- 8 Gearing up the 1991 Nigerian census**
Africa's most populous country prepares for first census since 1963
- 9 Perspectives on teenage parenting**
PRB's newest teaching kit reports on worldwide problem
- 9 PRB to celebrate 60th anniversary**
- 12 Albania has the highest fertility in Europe**
A look at the least-known Eastern bloc country, which is 70-percent Moslem

DEPARTMENTS

- 2 From the editor's desk**
- 2 Speaking graphically**
- 5 Survey report (Kenya)**
- 6 Demographer's page**
- 8 Positions/Professionals**
- 9 Software**
- 9 Population update**
- 10 Take a number**
- 11 Current readings**
- 12 Spotlight (Albania)**



The door has opened wider.
(See page 3.)



PRB

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FROM THE EDITOR'S DESK

Science writer Isaac Asimov once said that the world's greatest educational motivator was sheer interest. Everything is connected to everything else, he argued, and if you get seriously hooked on (for example) baseball, you're inevitably going to become familiar with such allied fields as statistics, physics, medicine, architecture, history (and – though he tactfully didn't mention them – pharmacology, labor relations, contract law . . .).

Of course, no matter what subject you get hooked on, you're eventually going to cross the path of statistics. To help you out with that dreaded encounter, "Against All Odds: An Introduction to Statistics" is a public television series that has just premiered

Every week, host Solomon Garfunkel whirls viewers through the world of numbers and how it relates to the everyday one, starting from the mean and median and working up to correlations of various variables.

Consisting of 26 half-hour programs, "Against All Odds" will be used as part of a "telecourse" connected with local universities and colleges. As such, its schedule, and indeed whether it airs in your viewing area this semester at all, will depend on current local course offerings.

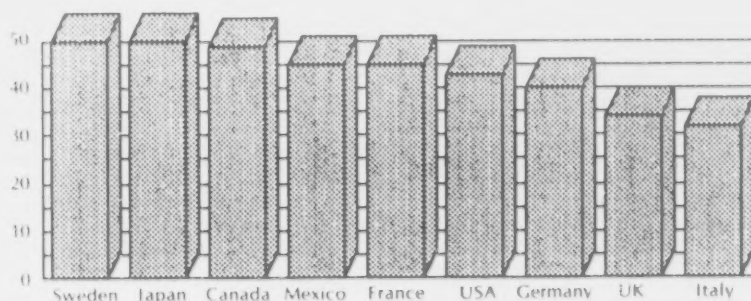
May "Against All Odds" flourish, for the sake of national "numeracy." Contact your local public-TV station for details.

— Art Haupt

SPEAKING GRAPHICALLY

Adults' Knowledge of U.S. Population as Surveyed in Selected Countries

Percent



Country

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Above is a graph from a 1988 survey of geographic knowledge conducted by the Gallup Organization for the National Geographic Society. As can be seen, several other nationalities had a firmer grasp of U.S. population size (which was 248.6 million as of June 1989) than did Americans.

Moreover, this was no trick demographic question that hinged on counting institutional population in Guam excluding Coast Guard serving on detached service overseas. Any answer between 150 million and 300 million was scored as "correct."

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*Educators and students should send supporting documentation

Global Contraceptive Use Rises

Half of all couples of childbearing age may now be practicing some form of contraception.

So reports the United Nations in a recent, major assessment that estimates the level of contraceptive use by region and country, and by specific method, as of 1983.

The table below presents the UN's new contraceptive prevalence estimates for the entire world by region, given low, medium, and high assumptions. As can be seen, the lowest levels of use (measured as percentage of married women of reproductive age currently using contraception) are found in Africa, while the highest levels are located in East Asia, a region whose widespread contraceptive use rivals even the more developed countries (MDCs).

As usual with demographic statistics, the "China effect" is significant. With China's prevalence rate of 74 percent, the medium assumption for the less developed countries (LDCs) as a group rises to 45 percent. With China's numbers left out, the LDC figure drops to 33 percent.

Arriving at a global—or even a regional—level of contraceptive prevalence is an arduous task, as any demographer will attest. But in recent years the interest of national governments in their country's fertility has increased, aided by greatly improved availability of data.

Thus, while in many cases, the UN



A village family planning meeting in Bangladesh

statisticians have had to adjust for different years or make projections for unsurveyed countries based on results for similar, surveyed ones, they have done so on the basis of contraceptive survey data for 97 countries containing over 80 percent of the world's population. Populations for which fertility data are lacking now constitute a distinct world minority.

Oddly enough, prevalence data are available for a greater percentage of the population of the LDCs than for that of the MDCs, this is largely due to a lack of prevalence data for one major MDC country, namely, the USSR.

Because survey results had to be applied to areas where no data were available, there is a range of possible error in the estimates. For this reason a range of low, medium, and high assumptions is given.

Projecting the data results, the study found that surgical sterilization continues to be the world's most popular form of birth control, constituting 36 percent of world contraceptive practice. Intra-uterine devices are second (19 percent),

and oral contraceptives third (15 percent), followed by condoms (10 percent), withdrawal (8 percent), and periodic abstinence (7 percent).

The survey reflects the durability of a worldwide trend, already observed in earlier studies, toward rising contraceptive use and declining fertility. Overall, from 1960-1965 (the height of the post-World War II "population explosion") to 1983, the benchmark year of the study, contraceptive use is estimated to have grown from 9 percent to 45 percent of couples of childbearing age. Although separating program effects from cultural and economic ones is also difficult, countries where contraceptive use has grown rapidly tend in addition to be countries with "strong" family planning programs.

Further, prevalence is strongly related to fertility level; the data suggest that the total fertility rate (TFR) declines by an average of 0.7 lifetime children per woman for every 10 percent that contraceptive prevalence rises.

These statistics indicate that significant progress has been made toward raising contraceptive use. Nevertheless, they also raise questions about ultimate levels of future population size. The UN has consistently projected future world population totals on the assumption that fertility levels will continue to follow a smooth curve down

Continued on next page

Global Estimates of the Percentage of Married Women of Reproductive Age Currently Using Contraception, Late 1983

Area	Prevalence level		
	Low	Medium	High
World	47	51	55
Developing regions	41	45	49
Developing regions excl. China	28	33	38
Africa	9	14	19
Asia*	46	50	54
East Asia	70	74	77
South Asia	29	34	39
Latin America	52	56	60
Developed regions	66	70	76

Source: *Levels and Trends of Contraceptive Use as Assessed in 1988*

*Excluding Japan, which is included in "Developed regions."

Black-White Gap Persisting Despite Gains

A comprehensive, four-year National Research Council study on the state of black America over the last 50 years has found that blacks still lag behind whites by nearly every indicator, despite great advances for both blacks and whites.

The July 1989 report, *A Common Destiny: Blacks and American Society*, found that from 1940-1970, blacks gained relative to whites in nearly every measurable area of American society. Sustained postwar economic growth, blacks' self-reliance, and laws outlawing discrimination were responsible for these advances, the committee noted.

The report adds, however, that since the early 1970s, these gains have faltered, due to economic stagnation and persistent racial discrimination.

Among the report's specific findings:

Economic Status: Blacks' per capita income in 1984 was 57 percent that of whites, up from 39 percent in 1939 but no higher than it was in 1971. Poverty rates, after declining substantially from 93 to 30 percent for blacks and 65 to 9 percent for whites between 1939 and 1974, have stopped falling since then—indeed rising to 31 percent for blacks and 11 percent for whites by 1986.

Residential Segregation: Black-white segregation in many metropolitan areas is almost as high today as in the 1960s—significantly higher, in fact, than that for Hispanics and Asian-Americans.

Health: Blacks remain behind whites on most health indicators. For example, the black-white gap in life expectancy, although cut in half between 1950 and 1985, has narrowed slowly since 1960—especially among men. At 65.3 years, black men's average life expectancy in 1985 is lower than that of white men in 1950 (66.5 years). Access to health care presents another problem, with 22 percent of blacks and 14 percent of whites under 65 covered by neither private health insurance nor Medicaid in 1982.

Child and Family Issues: Since the postwar baby boom, fertility rates for black and white women have fallen



A suburban black family in 1989

toward replacement level (Black women's total fertility rate in 1984 was 2.1 children, compared to 1.7 for white women.) Black and white children, however, are living under different family structures, with 80 percent of white children but only 40 percent of black children under 18 living with both parents.

Education: In spite of "substantial progress," opportunities for blacks and whites remain unequal. For example, the education level for blacks born in the late 1950s/early 1960s approximates that of whites of those cohorts (medians of 12.6 and 12.9 years, respectively), but the high school dropout rate for blacks, at about 20 percent, is almost double that of whites. Also, blacks are less than half as likely as whites to enter college within a year after graduation from high school, the committee noted.

The report also mentions blacks' political progress since 1940. When controlled for socioeconomic status, black voter participation has virtually caught up to that for whites, and the number of black public officials has increased dramatically. Blacks fare less well, the committee noted, in the criminal justice system, where they are over-represented as both victims and offenders. The committee also found that although whites generally desire equal treatment for blacks, "principles of equality are endorsed less when they would result in close, frequent, or prolonged social contact" with large

numbers of blacks.

Demographic changes should heighten current disparities, the report notes. According to the Census Bureau, blacks will make up 15 percent of the U.S. population by 2020—up from 11.7 percent in 1980. By that time, nearly 1 in 5 school age children and 1 in 6 adults of "prime working age" (ages 25-54) will be black. These trends, combined with the expected rise in the proportion of Hispanics and Asian-Americans in the population, indicate that the "importance of racial and ethnic minorities to the nation's well-being is growing."

—K.P.

A Common Destiny: Blacks and American Society is available for \$35 (prepaid) from National Academy Press. Interested persons may contact NAP at 2101 Constitution Avenue N.W., Washington, D.C. 20418; phone (202) 334-3313.

Contraception

Continued from previous page

(or up, in the case of low-fertility MDCs) to replacement level, in which couples average about 2.1 children.

As a result of these assumptions, the UN medium projections are on the order of 6.3 billion population as of 2000 and 8.5 billion in 2025, up from 1989's 5.2 billion.

What would such assumed fertility declines mean in terms of contraceptive use? The new assessment ventures to answer this question. For world population in 2025 to reach no higher than 8.5 billion, for example, would require the world's TFR to drop from the present 3.4 to 2.2 in 2025.

For that to happen, the study calculates that contraceptive use will have to rise still more—from today's roughly 50 percent of couples of reproductive age to 72 percent. In Africa, where prevalence is currently lowest (14 percent as of 1983), it would have to rise to 66 percent. The contention between population growth and family planning is far from over.

—A.H.

Levels and Trends of Contraceptive Use as Assessed in 1988, Population Studies No. 110, New York: United Nations, 1989. The UN Sales Number is E 89.XIII.4.

SURVEY REPORT

Kenya

Kenya has long had a reputation as the country with the highest national fertility rate in the world—notwithstanding recent data indicating that this distinction has been relinquished to nearby Rwanda.

As reported in *PT* last month, provisional data from the 1989 Kenya Demographic and Health Survey (KDHS) show that Kenya's total fertility rate (TFR) now stands at 6.7 lifetime births per woman on average, a sharp decline from the 1984 Kenya Contraceptive Prevalence Survey rate of 7.7. Although some of this difference may be attributable to differences in methods of measurement, it is consistent with recent increases in contraceptive prevalence also documented by the survey.

As might be expected after the country's flurry of family planning program activity in recent years, the KDHS found that recognition of at least one method of contraception is nearly universal among Kenyan women.

The programs also seem to have had a long-awaited effect on contraceptive prevalence. Twenty-seven percent of married women are currently using contraception, and two-thirds of these users employ modern methods. The most commonly used method is periodic abstinence (7 percent), followed by the pill (5 percent) and female sterilization (5 percent).

These figures represent a 50-percent increase in use of contraception since 1984, with a doubling in the proportion using a modern method. Even more significantly, rates of use in urban and rural areas are very similar, showing that services and supplies have reached the rural sector. The educational barrier has not been penetrated as effectively; prevalence among those

with no education is only 60 percent of that among primary school-educated women.

Government hospitals and clinics are the major suppliers of contraceptives and services, while Family Planning Association of Kenya (FPAK) clinics are the second most frequently mentioned sources for many methods. Most women using periodic abstinence learned of the method from relatives or friends.

There is still a disparity between contraceptive use and stated reproductive desires. Fifty-two percent of married women say they do not want any more children, a higher proportion than reported in many other sub-Saharan countries. An additional 26 percent say they want to wait at least two years before having a child. Thus, three out of four married women may be in need of family planning to achieve their reproductive intentions.

The major reason given for nonuse among women at risk of an unintended pregnancy is lack of knowledge (20 percent). Opposition of the husband (13 percent) and health concerns (12 percent) are the next most frequently cited reasons. About 20 percent of women not contracepting, but not wanting to become pregnant, say they are not at risk of pregnancy because they are menopausal, not often sexually active, or are breastfeeding.

The KDHS also interviewed 1,116 husbands from the same households where the wife was interviewed. The majority of these men, like the women interviewed, recognized at least one method of contraception, and most also knew of a source. Forty-eight percent said they are currently using a method of contraception, with periodic abstinence being the most common (25 percent of men interviewed),



Better health for young Kenyans

followed by the pill (8 percent), female sterilization (6 percent), and the IUD (5 percent). Only 3 percent said they were current users of condoms. Unlike the women interviewed, men were allowed to report current use of more than one method.

Information on health for children age 0-4 years was also collected by the KDHS. About one in 10 children had diarrhea during the two weeks before the survey, and more than three in five of these received oral rehydration therapy as treatment. Immunization coverage was verified for only 48 percent of the children age 1-4 years for whom mothers had a health card. Seventy-two percent of these children are fully vaccinated against the six major childhood diseases.

Although these results are preliminary, they do indicate that Kenyan women are actively beginning to pursue their stated reproductive desires. Indeed, if the preliminary data on the fertility rate are borne out by further analysis, Kenya may acquire a new reputation for making the greatest and most rapid gains in contraceptive prevalence in sub-Saharan Africa.

— B.S.

DEMOGRAPHER'S PAGE

The Dilemma in Estimating Postcensal State Poverty Rates

by Kelvin M. Pollard

The effort to obtain good subnational poverty data has grown more intense during the 1980s, as public and private agencies at state and local levels have had to assume many policymaking functions once held by the federal government.

These data are necessary for economic and social programs. Their amount and quality have not, however, matched the need for them. At the state and substate level the major data source is the decennial census, but that cornucopia of data becomes increasingly dated with each passing year. Between censuses, the most reliable source of poverty data is the Current Population Survey (CPS), a monthly study of about 56,000 households used primarily to provide employment and basic demographic information for the civilian, noninstitutional population.¹

The CPS's poverty data are primarily at the national level. The smaller the area of coverage, the less reliable CPS-derived statistics tend to be. Yet agencies and data users still call for updated poverty information at the subnational level.

Exactly how reliable are CPS-derived statistics in estimating state-level poverty? Various studies have tested for this. Ross and Danziger (1987) used the March 1980 and March 1986 CPS to estimate state poverty rates for 1979 and 1985, respectively. They found a high degree of unreliability when comparing the differences between the 1979 and 1985 rates. While the standard error for the national difference was less than three-tenths of a percentage point, that for individual states

ranged from 1 to nearly 5 percentage points.

The authors also mentioned that CPS-based county poverty rates are impossible to obtain because county of residence is not reported. Even without that problem, though, the dilemma of small sample size would still exist.²

In an update of the 1987 study, Plotnick and Danziger (1988) pooled data for the March 1984, 1985, and 1986 CPS to gain "mid-1980s" state poverty rates. This method, since it increased the sample sizes, produced more reliable rates, but it also made linking the estimates to one specific year impossible.³

In estimating the change in state poverty rates during the 1980s, are the

sentative not only of the national population, but also of the populations of the individual states.⁴

For both the 1980 Census and the 1988 CPS, I used data which determined whether persons in the respective samples had money income below the poverty level—approximately \$7,412 in 1979 and \$11,611 in 1987 (for a family of four). The poverty level is an index developed by the Social Security Administration which uses a set of thresholds, or "cutoff points," based on consumption requirements as stated in the Department of Agriculture's 1961 Economy Food Plan.

The thresholds, adjusted annually for inflation, vary by such characteristics as family size, number of children under 18, and age of the head of household. Each member of a family whose yearly income falls below its particular threshold is considered to live in poverty. Thus, the poverty level figures I mentioned represent the average annual income threshold for a family of four.⁵

Results

After calculating the 1979 and 1987 poverty rates by state, I tested the differences in the rates for statistical significance from zero to be certain that a state's poverty rate had really changed during the 1980s.

Table 1 lists the poverty rates for 1979 and 1987, and the difference between the two rates, for each state and the District of Columbia, as well as for the nation as a whole. Nationally, the poverty level between 1979 and 1987 increased by just over a percentage point (from 12.4 to 13.6 percent). For individual states, 28 followed the national trend, that is, their poverty rates also increased in the 1980s. The other 22 states and the District of Columbia saw their poverty rates fall during this period.

The table shows that the poverty increases in a number of states were more dramatic than the decreases in others. West Virginia's poverty rate, for example, jumped 8 percentage points—

Poverty differences
either way
were the
exception

problems of relying too heavily on CPS data still present? By comparing 1980 Census and 1988 CPS data, I will attempt to answer this question.

Data and Methods

Data on poverty in 1979 came from the 1980 Census long-form questionnaire, which sampled approximately 19 percent of the country's estimated 80.5 million households—slightly over 15 million in all.⁶ Compared with the roughly 56,000 households selected in the CPS, the larger sample size of the census produced more reliable statistics.

Data on poverty in 1987 came from the March 1988 CPS. In addition to employment and basic demographic information, this survey collected data on such characteristics as income and migration. The design of the 1988 CPS guaranteed that the sample was repre-

State Poverty Rates, 1979 and 1987

Census Division/ State	Poverty Rate (%), 1979	Poverty Rate (%), 1987	Absolute Change (in % points) 1979-1987	Census Division/ State	Poverty Rate (%), 1979	Poverty Rate (%), 1987	Absolute Change (in % points) 1979-1987
NEW ENGLAND				MIDDLE ATLANTIC			
Maine	13.0	12.2	-0.8	New York	13.4	14.8	1.4
New Hampshire	8.5	3.5	-5.0**	New Jersey	9.5	8.8	-0.7
Vermont	12.1	9.5	-2.6	Pennsylvania	10.5	10.4	-0.0
Massachusetts	9.6	8.6	-1.0	EAST SOUTH CENTRAL			
Rhode Island	10.3	8.5	-1.8	Kentucky	17.6	16.8	-0.8
Connecticut	8.0	6.9	-1.1	Tennessee	16.5	17.7	1.2
EAST NORTH CENTRAL				Alabama	18.9	21.2	2.3
Ohio	10.3	11.8	1.5**	Mississippi	23.9	25.6	1.7
Indiana	9.7	11.6	1.9	WEST SOUTH CENTRAL			
Illinois	11.0	14.5	3.4**	Arkansas	19.0	22.2	3.2
Michigan	10.4	12.4	1.9*	Louisiana	18.6	25.2	6.6**
Wisconsin	8.7	7.7	-1.0	Oklahoma	13.4	16.9	3.5*
WEST NORTH CENTRAL				Texas	14.7	17.0	2.3**
Minnesota	9.5	12.0	2.6*	MOUNTAIN			
Iowa	10.1	15.1	5.0**	Montana	12.3	18.4	6.1
Missouri	12.2	14.1	1.9	Idaho	12.6	14.3	1.6
North Dakota	12.6	12.3	-0.3	Wyoming	7.9	10.9	3.0
South Dakota	16.9	16.2	-0.7	Colorado	10.1	12.7	2.6
Nebraska	10.7	12.7	2.0	New Mexico	17.6	19.9	2.3
Kansas	10.1	9.9	-0.2	Arizona	13.2	12.6	-0.5
SOUTH ATLANTIC				Utah	10.3	10.6	0.3
Delaware	11.9	7.6	-4.3	Nevada	8.7	10.5	1.8
Maryland	9.8	9.7	-0.2	PACIFIC			
Dist. of Columbia	18.6	14.0	-4.5	Washington	9.8	11.9	2.1
Virginia	11.8	9.8	-2.0*	Oregon	10.7	13.1	2.4
West Virginia	15.0	23.1	8.1**	California	11.4	12.6	1.3*
North Carolina	14.8	14.3	-0.5	Alaska	10.7	11.6	0.9
South Carolina	16.6	15.5	-1.1	Hawaii	9.9	9.0	-0.9
Georgia	16.6	14.9	-1.7	UNITED STATES	12.4	13.6	1.2*
Florida	13.5	13.0	-0.5				

*Statistically significant at .10 level. **Statistically significant at .05 level.

Sources: 1979 statistics, U.S. Bureau of the Census, 1980 Census of Population; 1987 statistics, U.S. Bureau of the Census, Current Population Survey, March 1988 (machine-readable data file).

the most of any state. Louisiana, Montana, and Iowa also saw their poverty rates increase by at least 5 percentage points. In fact, 17 states had poverty rates which increased 2 or more percentage points between 1979 and 1987, but only five—including New Hampshire, Delaware, and the District of Columbia, all with declines of over 4 points—experienced decreases of that magnitude.

As the table also shows, every state in New England experienced a decline in its poverty rate; except for West Virginia, the same held true for the South Atlantic states. The states whose poverty rates increased were mostly in the Midwest (East and West North Central divisions), South Central (East and West divisions), and West (Mountain and Pacific divisions). In those regions, only seven states—Wisconsin, the Dakotas, Kansas, Kentucky, Arizona,

and Hawaii—saw their poverty rates decline. And the decreases in those states were 1 percentage point or smaller.

Discussion

Testing an estimate for statistical significance first involves calculating its standard error, which measures the estimate's reliability. Both the size of the estimate and the size of the sample determine the magnitude of error.

To deal with the unreliability of the estimates (since they were derived from samples), I first calculated the standard errors of the respective poverty rates for 1979 and 1987. I was then able to calculate standard errors for the differences between the rates. With both the differences and the standard errors of those differences, I could then test whether the changes between 1979 and 1987 rates were statistically significant.

Table 1 shows statistical significance was the exception rather than the rule among the states—only 12 had statistically significant differences at the .10 level (meaning at least a 90-percent probability that a state's poverty rate actually changed between 1979 and 1987).

For some of these states, there are reasonable explanations as to what may have happened. Take the states which had statistically significant increases, for example. The recession of the early 1980s and slow recovery in certain industries—sectors crucial to the economies of the affected states—might have accounted for the change. Examples of such industries include durable goods manufacturing (Ohio and Michigan), farming (Iowa), coal mining (West Virginia), and oil producing (Louisiana, Oklahoma, and Texas).

Continued on page 10

New Nigerian Census Planned for 1991

Nigeria will hold a national population census in November 1991 – a highly significant demographic event for both Nigerian government planners and population researchers. The most recent official census took place in 1963, over a quarter-century ago.

Nigeria has an estimated 1989 population of 115 million – a figure projected from the 1963 Census totals as well as fertility estimates. The new census's totals may diverge from previous estimates. But whatever the exact figure, Nigeria easily has the largest population of any country in Africa – twice as many as the second largest, Ethiopia (The government sponsors a family planning program and has an official population goal of no more than 4 children per mother by 2000. Presently, women have an average of 6.6 lifetime births.)

The country (comprised of 21 states and presently under military rule), is larger than two Californias. But it is divided among numerous ethnic groups, the principal groups being the people of northern Nigeria, who are Moslem, and the southern and coastal population, who are Christian and animist. These two groups are probably about the same size – though because of the dearth of head counts, the exact proportion remains unknown.

In nations containing contending ethnic or religious factions, censuses can take on far more political significance – and controversy – than is the case in more homogeneous countries. Official population figures are pivotal in Nigeria because on them will depend the population-based apportionment of the national legislature, and hence, the country's political balance. (The legislative branch is currently suspended by military rule, but is slated to resume its functions.)

In 1962, shortly after independence from Great Britain, the first Nigerian national census was taken. Its results were repudiated by the government, and a second census was conducted in 1963, supervised by a central Census Board. This census also came under legal attack, but was ultimately accepted by the government.

The 1963 Census was both the first and the last official Nigerian census. In November 1973 a new census was held. But its provisional result was rejected by Nigeria's military government, who branded the reported population total of 79 million as too high, and criticized the ad hoc enumeration structure.

Only in the last year have preparations for a new census gained impetus. In June 1989 Alhaji Shahu Musa, chairman of Nigeria's National Population Commission, spoke to an audience at PRB's Washington office.

Musa described the ongoing preparations for 1991. The size of the enterprise is vast – Nigeria's population is close to half the size of the U.S.'s. Significant geographic barriers divide the country. But census planning is going forward, and the essentials for any head count – maps, manuals, forms – are being prepared.

There will be, Musa said, some 200,000 enumeration areas, 300,000 enumerators, and 50,000 supervisors.

The enterprise will be run by his National Population Commission, with offices in all the 450 local governments. The UN Population Fund will provide assistance.

"Accuracy" and "acceptability" were two essential elements of the census, Musa said. The goal will be to hold the census within a three- or four-day period for purposes of simultaneity. Questionnaires will come in only one size, and the census will not include questions regarding religious and ethnic affiliation, on the theory that state population figures alone will cause controversy enough because of their effect on apportionment. "We must cross the river first" before adopting such ambitious enumeration proposals, Musa advised. Religion may be added to postenumeration surveys later.

State results will be verified using supervisors from outside each state. Detailed results will be published starting in 1992.

—A.H.

POSITIONS/PROFESSIONALS

Assistant Professor, a tenure-track position in the Department of Sociology, University of Maryland, College Park, and as Faculty Associate in the Center on Population, Gender, and Social Inequality.

Requirements. PhD required; the Center is interested in candidates who specialize in demography with an emphasis on development and gender, but will consider demographers with other emphases. Teaching experience is helpful, but of primary interest is the candidate's potential for conducting publishable research and obtaining external grants.

Contact: Send letter of application, curriculum vitae, and the names of three references (but not reference letters) to Prof. Harriet Presser, Demography Search Committee, Dept. of Sociology, University of Maryland, College Park, Md. 20742. For best con-

sideration, materials should be received by Nov. 1, 1989.

The Rockefeller Foundation is continuing its **Social Science Research Fellowship** program in population studies for 1990, enabling up to six highly qualified persons holding social science doctorates within the last 10 years to receive appointments as scholars in developing countries, starting in late 1990.

They will be placed at universities that have training and research programs in population studies or at research centers. The program is open to citizens and permanent residents of the U.S. and Canada. Applications must be received by Dec. 31, 1989.

Contact: Fellowship Office, Rockefeller Foundation, 1133 Avenue of the Americas, New York, N.Y. 10036.

New PRB Teaching Kit On Teenage Parenting

"Teenage Parents: A Global Perspective," PRB's newest teaching kit is designed for use in the junior high and high school.

Teenage childbearing and parenting have become major concerns in the U.S. and worldwide. The purpose of the materials in the teaching kit is to give students an overview of the health, social, psychological, economic, and demographic effects of teenage childbearing and subsequent parenting, worldwide. These materials introduce the issue from a global perspective giving students a framework to compare the United States to other countries.

This kit contains an informative 16-page student reading booklet of prereading questions, case studies, a glossary, worksheets, and a reading list, a wall-size data poster entitled "Teen Mothers: Global Patterns", and a teacher's guide.

—K.C.

Copies of "Teenage Parents: A Global Perspective" are \$7.00 ea. PRB members receive a 20 percent discount for one copy. Send orders to PRB, Circulation Dept., P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB. Orders for \$50 or less must be prepaid and include \$1.00 or 5 percent (whichever is greater) for postage and handling.

PRB Awards Dinner

The Board of Trustees and the Staff of the Population Reference Bureau, Inc., cordially invite you to celebrate PRB's 60th anniversary at the 1989 Annual Awards Dinner recognizing outstanding contributions in the field of demography.

The dinner speaker will be Dr. Richard Berendzen, President of The American University.

Date: Thursday, Oct. 26, 1989

Time: Cocktails (cash bar) 6:30 pm
Dinner and Awards Ceremony
7:15 pm

Place: National Press Building
14th and F Sts., N.W.
Washington, D.C.

Awards Dinner tickets are \$40 each. Send check to Population Reference Bureau, Attn: Dyanne Johnson, 777 14th St., N.W., Suite 800, Washington, D.C. 20005. Checks payable to PRB.

SOFTWARE

POPSYN is an integrated program that "puts all major demographic software at your fingertips," according to the developer, Garcia-Bogue Research and Development, Ltd. (GBR&D). **POPSYN** essentially consists of a controlling program developed by GBR&D which operates a collection of some 90 statistical and demographic programs written by others. Half of these were previously unavailable and include programs that evaluate and refine demographic data, construct life tables, perform population projections, and manipulate population models.

In order to fully utilize **POPSYN**, the user must also possess the United Nations life-table pro-

gram **MORTPAK-LITE**, the East-West Population Institute fertility program **EASWES**, and Lotus 1-2-3 (ver. 2.01 or later). These programs are available from other sources, as well as from GBR&D.

Hardware requirements for **POPSYN** are an IBM PC, AT, or compatible with 640K memory, a hard disk, DOS 3.1 or higher, and a printer with either a wide carriage or condensed-print capability.

POPSYN costs \$164.00 for developed-nation users and \$140.00 for developing-nation users. For full information, contact GBR&D, P.O. Box 37-7710, Chicago, Ill. 60637. Phone (312) 947-2014.

—A.H.

POPULATION UPDATE

Estimated United States Population:

As of June 1, 1989	248,557,000
As of June 1, 1988	246,104,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1042.

Estimated World Population:

As of October 1989	5,257,000,000
Annual growth	93,000,000

Extrapolated from the mid-1989 population on PRB's 1989 *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: April 1989

Item	12 months ending with April					
	Number		Rate			
	1989	1988	1989	1988	1987	1986
Live births	3,933,000	3,833,000	16.0	15.7	15.5	15.7
Deaths	2,150,000	2,164,000	8.7	8.9	8.7	8.7
Natural increase	1,783,000	1,669,000	7.3	6.8	6.8	7.0
Marriages	2,385,000	2,388,000	9.7	9.8	10.0	10.2
Divorces	1,182,000	1,155,000	4.8	4.7	4.8	5.0
Infant deaths	38,500	38,300	9.8	10.0	10.3	10.5
Population base (in millions)			246.5	244.1	241.8	239.1

Note: Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source: *Monthly Vital Statistics Report* (Vol. 38, No. 4) from the National Center for Health Statistics.

Demographer's Page

Continued from page 7

As for New Hampshire and Virginia — the only states with statistically significant decreases — the influx of jobs, which sparked booming economies, may have led to their declines in poverty. For most states, however, speculation is fruitless because of the lack of statistically significant changes.

The results of the test for statistical significance call into question sole reliance on the CPS in estimating state poverty rates, for which its sample design was not intended. But the increased policy responsibilities of state and local agencies have enlarged the need of these organizations for intercensal poverty estimates. Faced with this dilemma, what are they to do?

One answer might lie in demographic methods similar to those used to provide intercensal population estimates. Agencies in states such as Kentucky, North Carolina, Ohio, New York, Texas, and Minnesota have attempted regression-type models using various symptomatic indicators (e.g., unemployment rate, number of AFDC recipients, and per capita income) in estimating poverty at the state and county level. The added responsibilities placed on state and local governments in matters related to policy, as well as the growing need for intercensal statistics by data users in general, encourages continued exploration and refinement of such methods.

References

1. U.S. Bureau of the Census. *Current Population Survey, March 1988 Tape Technical Documentation*. Prepared by Data User Services Division, Data Access and Use Staff, Bureau of the Census. Washington D.C.: Bureau of the Census, 1988.
2. Ross, Christine, and Sheldon Danziger. Poverty Rates by State, 1979 and 1985. A Research Note. *Focus* 10:3 (Fall 1987): 1-5.
3. Plotnick, Robert D., and Sheldon Danziger. Poverty Rates by State in the Mid-1980s. An Update. *Focus* 11:3 (Fall 1988): 12-14.
4. U.S. Bureau of the Census. *1980 Census of Population, Volume 1, Characteristics of the Population, Chapter C, General Social and Economic Characteristics*. United States Summary. Washington D.C.: U.S. Government Printing Office, 1983.
5. ———. *Current Population Survey, March 1988 Tape Technical Documentation*.
6. Current Population Reports. Series P-60, No. 163. *Poverty in the United States, 1987*. Washington D.C.: U.S. Government Printing Office, 1989.

TAKE A NUMBER

A Nation of . . .: Throughout its early history, the U.S. was known as a "nation of farmers." While that truism is no longer true, it's revealing to see just how dramatically the U.S. occupational structure has changed since colonial days. The Bureau of Labor Statistics (BLS) lists 1.2 million Americans as "farmers" during 1986 and projects that by 2000, there will be but 850,000 farmers left, which may be fewer than existed when George Washington was President.

If the country is no longer a nation of farmers, then what is it? That depends a bit on how occupational categories are grouped, but here are some of the prime contenders (figures below are in millions):

Secretaries, 4.4 million in 1986, 4.6 projected for 2000; retail salespersons, 3.6 in 1986, 4.8 in 2000; truck drivers, 2.5 and 3.0; chefs, cooks, and kitchen workers, 2.6 and 3.4; food service workers, 4.2 and 5.8; registered nurses, 1.4 and 2.0; school and college teachers, 3.6 and 4.1; and janitorial/building service workers, 3.1 and 3.8.

Specific occupations that either now outnumber farmers or are

projected to by 2000 are: information clerks, stock clerks, nurses' aides/orderlies, waiters, waitresses, and guards. Even non-farm gardeners and grounds-keepers are expected to outnumber farmers, a result of expected growth in the lawn care industry. And by 2000, farmers' numbers will be challenged by the number of lawyers, who should number 718,000. More lawyers than farmers? It could happen here.

Here and There . . .: Singapore reports a sharp rise in its crude birth rate in 1988, 20.0 births per 1,000 population, compared to 16.8 in 1987, and 14.8 in 1986 — the crude birth rate in Italy, the country with the world's lowest total fertility rate, did not continue to fall from its record low level in 1987, but rose slightly in 1988, to 9.9 from 9.6 — an increasingly pervasive trend: fertility in Northern and Western Europe continues to rise (will Sweden return to replacement level?), while rates in most European countries with traditionally higher fertility — Eastern and Southern Europe, along with Ireland — are headed in the opposite direction.

— C.H.

ADDENDA



In the U.S.'s Northeast, the region with the highest median age (a relatively wizened 33.5 years, as of 1988), eyeglasses are considered a big deal when a new shipment reaches the convenience stores (this one in Massachusetts).

CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St. N.W., Washington, D.C. 20005.

SAVING THE TROPICAL

FORESTS, by Judith Gradwohl and Russell Greenberg. Covelo, Calif.: Island Press, 1988. 207 pages. \$24.95 cloth. ISBN 0-933280-81-5.

This book comes in two parts: a review of the dynamics of the destruction of the world's tropical forests and 40 case studies of vestpocket projects that "show there are solutions."

The authors succinctly review the reasons for and the consequences of the uprooting of the rain forests at the astonishing rate of 20 to 40 hectares every minute. The authors' tightly reasoned explanation of the problem, albeit familiar material, is worth the price of the book.

The case studies of 40 miniprojects make fascinating reading, too, but they don't make the case for available solutions. The varied projects cover the successful maintenance of forest reserves, sustainable agroforestry, able natural forest management, and restoration of tropical forest areas.

Part II seems to depend heavily on the accounts of the participants and their friends. Often these projects are at too early a stage to permit a look at the outcome. The authors state that a "common characteristic of the successful projects is the presence of local, charismatic leaders." Another common characteristic is foreign money and experts to impel the projects. It also helps to have the project in a corner of the forest that nobody cares about at the moment.

The source of the deforestation

problem – and the eventual solution for it – is to be found in the cities, where economic and social decisions are made. People, particularly the person now reading this review, want more and more things at a faster and faster rate. None of the projects – agroforestry in Haiti, iguana ranching in Panama, soil conservation on steep Philippine slopes, etc. – could last five minutes if gold were discovered in the area.

– Win Carty

POPULATION AND RESOURCES IN WESTERN INTELLECTUAL TRADITIONS,

edited by Michael S. Teitelbaum and Jay M. Winter. *Population and Development Review* 1988, Vol. 14 (Supplement).

This special 310-page supplement to *Population and Development Review* recounts some of the population issues and demographic work that have roiled the intellectual history of the last three centuries – from Malthus to Marx, from utopianism to fascism, from evolution to ecology. Organized under political, natural-science, and social-science subject headings, the 13 contributed articles describe how the theorists of various ages have tried to deal with the powerful idea that population numbers can give events a new dynamic.

Thinking about population questions has its own long and convoluted history, too often ignored. Consequently, the editors argue, there is "a tendency of today's writers to adopt positions of whose intellectual pedigree they might be largely unaware." That fate is less likely to befall the population person who steep himself or herself in this fascinating historical overview.

– Art Haupt

Books Received

ADAPTING TO DROUGHT: Farmers, Famines and Desertification in West Africa, by Michael Mortimore. New York: Cambridge University Press, 1989. 299 pages. \$59.50 cloth.

AMERICA IN THE GLOBAL '90s, by Austin H. Kiplinger and Knight A. Kiplinger. Washington, D.C.: Kiplinger Books, 1989.

THE CHALLENGE OF GLOBAL WARMING, edited by Dean Edwin Abrahamson. Covelo, Calif.: Island Press, 1989. 350 pages. \$19.95 paper.

DISTURBING THE NEST: Family Change and Decline in Modern Society, by David Popenoe. New York: Aldine De Gruyter, 1988. 390 pages.

THE ECONOMIC STATUS OF AMERICANS OF ASIAN DESCENT: An Exploratory Investigation, by the U.S. Commission on Civil Rights. Washington, D.C.: U.S. Government Printing Office, Clearinghouse Publication No. 95, October 1988. 171 pages.

IDEOLOGY AND IMMIGRATION: Australia 1976 to 1987, by Katharine Betts. Victoria, Australia: Melbourne University Press, 1988. 234 pages. \$24.95 paper.

LIFESTYLES, CONTRACEPTION AND PARENTHOOD, edited by Hein Moors and Jeannette Schoorl. The Hague, Netherlands: NID ICBG Publications, 1988. 407 pages.

THE METROPOLIS ERA. Vol. I: A World of Great Cities, edited by Mattei Dogan and John D. Kasarda. Newbury Park, Calif.: Sage Publications, 1988. 394 pages.

THE METROPOLIS ERA. Vol. 2: Mega-Cities, edited by Mattei Dogan and John D. Kasarda. Newbury Park, Calif.: Sage Publications, 1988. 322 pages.

THE NEW AMERICANS: Immigrant Life in Southern California, by Ulli Steltzer. Pasadena, Calif.: NewSage Press, 1988. 175 pages.

REPRODUCTIVE HEALTH EDUCATION AND TECHNOLOGY: Issues and Future Directions, edited by Ronald H. Magarick and Ronald T. Burkman. Baltimore: The Johns Hopkins Program for International Education in Gynecology and Obstetrics, 1988. 200 pages.

RURAL AFRICANA, Journal of The African Studies Center, Michigan State University. East Lansing, Mich.: African Studies Center, Issues 28-29, Spring-Fall 1987. 150 pages.

THE SUGAR CANE INDUSTRY: An Historical Geography from its Origins to 1914, by J.H. Galloway. New York: Cambridge University Press, 1989. 266 pages.

SPOTLIGHT

ALBANIA

Population (mid-1989): 3.2 million
Land area: 11,100 sq. miles
Births per 1,000 pop.: 25.9
Deaths per 1,000 pop.: 5.6
Rate of Natural Increase: 2.0 percent
Total Fertility Rate: 3.2 children per woman
Infant Mortality Rate: 28.2 infant deaths per 1,000 live births
Life Expectancy at Birth: 70 years
GNP per capita (1986 est.): \$930
Capital: Tirana

by Gwenda Brophy

Albania, a country the size of Maryland nestled in the Balkans facing the Adriatic Sea, presents an elusive and demographically idiosyncratic picture.

In this extremely closed Eastern Bloc society, obtaining even moderately detailed demographic information is a difficult task. The country is predominantly agrarian—as of 1987 the 1.5-million labor force was 60 percent in agriculture and 40 percent in industry and commerce. Some 70 percent of the population are Moslem, although Albania is a determinedly atheist state and churches and mosques were closed down in 1967.

The 3.1-million population has a annual growth rate of 2.0 percent. This is far and away the fastest growth in Europe, but the government believes that the population is still not increasing rapidly enough. Nevertheless, it has no explicit population policy, and governmental attempts to promote growth have focused on negative inducements rather than positive ones (e.g., the cash and/or child care facilities offered in other European countries).

Family planning has not been encouraged, and general practitioners do not consider this area to be part of their responsibility. There is a marked lack of modern contraceptives, and by all reports the only type available is condoms—possibly imported from the

USSR—whose quality is alluded to in their nickname, “galoshes.” Their availability and price are not known.

Unlike other Eastern European countries, Albania did not follow the lead of the USSR in the 1950s in loosening restrictions on legal abortion—a key proximate determinant in many other countries in the bloc. At least until recently, abortion has remained severely restricted.

Just the same, fertility has declined, from a total fertility rate (TFR) of 6-to-7 average lifetime children per woman in the period of the mid-1950s to 1960, falling to 5.6 in 1965, 4.9 in the mid-1970s, and 4.2 in 1978. In sharp contrast to the range of TFRs in the rest of the Eastern bloc—approximately 1.7-2.3—Albania's TFR of 3.2 stands the highest.

How Albania's fertility reduction was achieved remains an item of speculation. However, use of traditional methods—withdrawal or a combination of withdrawal and rhythm, backed up by illegal abortion—may have played a key role. A high reliance on traditional methods has been a feature of many Eastern European countries. (In Bulgaria, for example, only 8 per-

cent of the reported 76-percent contraceptive prevalence is due to modern methods, in Poland 26 percent out of 75 percent, and in Czechoslovakia 25 percent out of 60 percent.)

Marriage in Albania comes relatively late, with an average age of 22 years for women and 23 for men. In this country of strong social discipline, there is strict control over the behavior of youth, and by all accounts premarital sex is heavily discouraged.

The level of fertility in Albania remains higher than average in either Western or Eastern Europe, and several factors may be contributing to this. The country is still a traditional, and tradition-steeped, society, with a patriarchal clan structure, and its predominantly rural nature and Moslem profile together with the government interest in promoting population growth would appear to militate against further fertility decline.

The role of women is somewhat ambiguous, reflecting the mix of traditional and statist forces at work in this society. Both men and women must give two years of military service.

Despite the country's isolation and traditional culture, modernization has started to pick up speed, accelerated by the 1985 death of Enver Hoxha, for four decades the country's autocratic ruler. Urbanization now stands at 40 percent, and infant mortality (which was 121 infant deaths per 1,000 live births in 1950) now stands at 28. Improved health and social services have contributed to a startling increase in life expectancy, to 70 years. And the publication in 1988 of a statistical reference book, *Forty Years of Socialism*, represents a new statistical openness.

Gwenda Brophy is currently a consultant at the Futures Group, Washington, D.C.

Courtesy, Office of the Geographer, U.S. Dept. of State

